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ASSESSING CAREER DECISION-MAKING STATUS:
THE CASVE CYCLE QUESTIONNAIRE

by

Brianna Werner

A Thesis
Submitted to the Graduate School
and the Department of Psychology
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Master of Arts

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ABSTRACT

ASSESSING CAREER DECISION-MAKING STATUS:

THE CASVE CYCLE QUESTIONNAIRE

by Brianna Werner

May 2017

The CASVE Cycle Questionnaire (CASVE-CQ) was developed to assess an individual's progress in the CASVE cycle. A multi-phase development process was utilized, which included: initial item development, review by the current targeted demographic (i.e., college students), expert review, measure pilot, and measure administration with item refinement at each of the first three phases. Additionally, the CASVE-CQ identifies those who may have passed over important components of the CASVE cycle. As hypothesized and consistent with guided theory, exploratory factor analysis resulted in a 6-factor measure consisting of 55 items. Validity was supported through correlations between the CASVE-CQ and the identity subscale of the My Vocational Situation (MVS; Holland, Daiger, & Power, 1980), Career Decision-Making Difficulties Questionnaire (CDDQ; Gati, Krausz, & Osipow, 1996), Career Commitment Measure (CCM; Carson & Bedeian, 1994), and the Career Thoughts Inventory (CTI; Sampson, Peterson, Lenz, Reardon, & Saunders, 1998). The CASVE-CQ allows both researchers and practitioners to be able to assess the career decision-making progress of individuals grounded in theory.

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CHAPTER I - INTRODUCTION

Across the United States, there were 387,000 students enrolled in baccalaureate studies as undeclared majors in 2003 (U.S. Department of Education, 2009). Six years later in 2009, 21% of these students had no degree and were no longer enrolled whereas 10% were still enrolled with no degree. However, for those who did declare majors, completion rates were 5% higher (U.S. Department of Education, 2009). Choosing a field of study, which is of particular concern to undeclared college students, is actually a career decision faced by every college student. The skills used to make informed career decisions will be repeatedly used throughout one's college career and professional life.

The cognitive information processing (CIP) theory assists individuals in identifying a career problem and then taking the appropriate steps to close the gap between where an individual is currently and where the individual would like to be in the future (Sampson, Peterson, and Reardon, 1989). These CIP-defined decision-making steps are referred to as the CASVE cycle and include the following phases: communication, analysis, synthesis, valuing, and execution. Individuals navigate from identifying a career problem, evaluating many possibilities, narrowing their options, evaluating their choices in relation to their support system and external factors, and finally making a choice and implementing a plan to see their choice through.

Currently, there are no instruments available to assess an individual's standing in the CASVE cycle. The purpose of this study was to develop a measure of career decision-making based on the CASVE cycle, the CASVE Cycle Questionnaire (CASVE-CQ). Items were developed based on previous research and literature involving the cognitive information processing theory, career decision-making literature, and similar existing

measures. The cognitive information processing theory is used extensively in applied settings, and this measure will allow career counselors to pinpoint an individual's position in the CASVE cycle to more efficiently and effectively serve clients. Therefore, the purpose of this study was two-fold: (1) to create and empirically evaluate items to measure each of the CASVE cycle phases and (2) establish convergent and discriminant validity with the new measure and other existing related measures.

CHAPTER II – LITERATURE REVIEW

Cognitive information processing and career decision-making

In 1989, Sampson, Peterson, and Reardon introduced the cognitive information processing theory to career development as a systematic approach to career counseling. Two years later, the founders of CIP theory further explained the approach utilizing an information-processing pyramid (Peterson, Sampson, & Reardon, 1991). The pyramid consists of three tiers and four domains with the bottom tier including two domains. The first tier includes self-knowledge and occupational knowledge; information individuals should explore before advancing to the second tier. Self-knowledge has developed over time and includes elements such as values, interests, and skills. In contrast, occupational knowledge is factual and is learned through experiences and exposure. The third domain, on the second tier of the information processing pyramid, is the decision-making skills domain where individuals utilize the CASVE cycle, CIP theory's approach to career decision-making to navigate complex career decisions. The fourth domain at the top of the pyramid is the executive processing domain which focuses on metacognitions including self-talk, self-awareness, and an individual's ability to assess and control where they are in career decision-making. The pyramid of information processing domains function utilizing top-down processing and are interrelated (Peterson et al., 1991). The CIP theory to career development promotes the idea of allowing the client to become self-reliant in the career decision-making process (Peterson et al., 2002). Grounded in cognitive psychology, the CIP theory places emphasis on dysfunctional thinking and metacognitions as barriers surrounding the career decision-making process (Peterson et al., 2002).

The CIP theory begins with an individual identifying a gap in their career development. This gap is referred to as a career problem. Next, individuals seeking assistance identify where they are in their career development and where they would like to be in the future. Ultimately, they detail a path for closing the gap through occupational and self-knowledge uniting and ultimately making a plan for their career decision (Peterson et al., 2002).

It has been argued that career decision-making is not a one-time occurrence, but rather career decision-making will happen more than once throughout an individual's lifespan because when looking at one's career progression it may not be linear in what traditionally would have been considered the progression of one's chosen profession (Krieshok, Black, & McKay, 2009). Further, career development is viewed as a life-long process in which individuals will often have multiple jobs and may switch careers. The CIP theory aims to teach individuals to become self-reliant decision makers (Sampson, Peterson, & Reardon, 1989). The CIP information processing domains allow individuals to process what they need to know and the CASVE cycle, in the end, encompasses what individuals need to do or execute (Sampson, Reardon, Peterson, & Lenz, 2004). Therefore, the CASVE cycle plays a key role in equipping individuals with the knowledge to become independent career decision-makers, provides a framework for future career decision-making and allows individuals to develop critical thinking skills surrounding career decision-making (Sampson, Peterson, & Reardon, 1989).

Career decision-making and the CASVE cycle

Parsons (1909) developed the first career development model, which included three components: (1) clear self-understanding, (2) knowledge of occupations, and (3) the

ability to draw relationships between the first two components. The CIP theory maps onto Parsons' model by having three similar constituents. The third element in the CIP theory, career decision-making, matches Parsons' third component, the ability to draw relationships between self-understanding and occupational knowledge (Peterson et al., 2002).

In 1953, Super outlined what would become the basis for all subsequent career decision-making phase models. Super pulled from the developmental psychology literature and concluded that decision-making should be modeled as self-knowledge in addition to the influence of external factors, something that previous career decision-making theorists had not done (Walsh & Osipow, 1988). Previous theorists placed emphasis on what individuals wanted to do, interests, instead of what could actually be done, abilities (Walsh & Osipow, 1988).

The nature of career problems can be multifaceted and complex and therefore require a simple, consumable model of career decision-making (Sampson et al., 1996b). Similar to Super's developmental outline, career problem-solving in the CIP theory is the convergence of details, including occupational and self-knowledge, surrounding one's available choices in their career development. To elaborate, career decision-making includes career problem-solving in combination with the deliberate actions that one must take in order to best resolve the problem, which is better understood in the form of the CASVE cycle (Peterson et al., 2002). Each career-related decision can be viewed in context of the CASVE cycle (Reardon, Lenz, Sampson, & Peterson, 2011).

The CIP theory's CASVE cycle functions as a guide for individuals to make deliberate and informed career decisions (See Appendix A). Communication is the phase

in which an individual identifies a career problem, by determining where they are currently and where they would like to be in the future (Peterson et al., 1991, 2002). In the communication phase there are three major components that would typically be addressed including identifying knowledge that needs to be obtained, how much assistance is necessary, and dysfunctional thoughts surrounding career decision-making (Sampson et al., 1989). Analysis is the phase in which individuals obtain knowledge about themselves, various occupations, and relates it to their existing knowledge (Peterson et al., 1991, 2002). Synthesis is the phase in which an individual takes his or her knowledge and narrows the possibilities they have generated to only three to five possible options (Peterson et al., 1991, 2002). During the synthesis phase, an individual should engage in elaboration by creating a thorough list of options and then narrowing down the list to obtainable options through crystallization. When one is in the valuing phase, they thoroughly consider their narrowed list of options. In this phase, an individual considers factors he or she holds important including a significant other, family, and even the larger community (Peterson et al., 1991, 2002). One qualitative study found that individuals valued the input of those who support them, especially family, in their career decision-making (Bubany, Krieshok, Black, & McKay, 2008). The valuing phase of the CASVE cycle focuses on integrating knowledge about occupations and personal values including the relationship between career and family, obtaining the input of loved ones can be an additional source of information to help narrow options. Execution is the phase in which an individual creates and acts on a plan to resolve their career problem, and close the gap between where they are and where they would like to be in the future (Peterson et al., 1991, 2002). In this phase, an individual gives attention to the realistic constraints of his or her

options (Sampson et al., 1989). An important feature of the CASVE cycle is that individuals will then go back to the communication phase to see if the career problem was eliminated (Peterson et al., 1991, 2002). The phases of the CASVE cycle will be revisited if the problem goes unsolved or if new decisions arise as a result of making a previous decision.

Using a six-phase model of career decision-making developed from multiple career decision-making models, including the CASVE cycle, Hirschi and Lage (2007) found a curvilinear relationship between phase and number of career choices. In the beginning, a low number of career choices are considered. As someone cycles through the phases, more choices are considered and as the phases come to an end, an individual has eliminated possibilities and should have fewer, more informed options (Hirschi & Lage, 2007). In addition, vocational identity was higher at the end of the career decision-making phases. Although this study did not use the CASVE cycle, the model of career decision-making used was similar. The CASVE cycle was developed to allow individuals to generate many choices and then narrow their options. This allows an individual to openly explore possibilities using self and occupational knowledge to eventually critically evaluate each option in the context of his or her own life in terms of ability limitations, family, and significant others.

Dysfunctional career thoughts are negative thoughts surrounding career decision-making and may inhibit an individual's ability to engage in the subsequent phases (Sampson, Peterson, Lenz, Reardon, & Saunders, 1998). According to CIP theory, individuals are often caught in the communication phase due to dysfunctional career thoughts. CIP theory dictates that these negative career thoughts should be addressed

early in the CASVE cycle to enable individuals to more fully participate in exploring their options.

Establishing construct validity in the CASVE-CQ

The current study created the CASVE Cycle Questionnaire (CASVE-CQ) to determine an individual's standing in the CASVE cycle and assess overall career decision-making progress, but also looked to establish evidence of convergent and discriminant validity for the CASVE-CQ through correlational analyses with five external constructs. Vocational identity, or the development of one's concrete career interests and goals, was used to assess the vocational identity subscale of the My Vocational Situation (Holland et al., 1980). It was hypothesized that vocational identity would positively correlate with the total score of the CASVE-CQ. The total score, explained in more detail in the Instruments section, indicates amount of completion of the steps in the CASVE cycle phases. A correlation between the CASVE-CQ total score and vocational identity was anticipated because those who have salient vocational identities will be able to more effectively process career decisions. Career decision-making difficulties were assessed using the Career Decision-Making Difficulties Questionnaire (Gati et al., 1996). Those who had high levels of career decision-making difficulties were predicted to be less able to make effective career decisions and more likely to be caught in the beginning phases of the CASVE cycle. Career commitment refers to the connection an individual has with his or her profession and was assessed using the Career Commitment Measure (Carson & Bedeian, 1994). It was hypothesized that those who had high career commitment would also be effective career decision-makers and would be in more advanced phases of the CASVE cycle. Emerging adulthood is a construct used to

identify individuals in transitional phases of life, including the college years. Emerging adulthood is marked as a time of self-exploration and discovery. Emerging adulthood was assessed by the Inventory of the Dimensions of Emerging Adulthood and it was predicted that those who are high in the dimensions of emerging adulthood would be less advanced in the CASVE cycle career decision-making phases because these individuals are engaged in self-exploration (Reifman, Colwell, & Arnett, 2007). Finally, negative career thoughts were assessed using the Career Thoughts Inventory and those high in negative career thoughts were hypothesized to be in less advanced stages of the CASVE cycle as indicated by a low total CASVE-CQ score, which indicates amount of completion of the steps in the CASVE cycle phases (Sampson et al., 1998). In addition, the relationships between the items on the CTI that assess specific phases of the CASVE cycle and the CASVE-CQ items were analyzed by phase to determine convergent in CTI CASVE-phase specific times with CASVE-CQ phase specific predicted factors. Overall, individuals that have higher vocational identity and career commitment were predicted to be in more advanced phases of the CASVE cycle and those who have many career decision-making difficulties, negative career thoughts, and are high in the dimensions of emerging adulthood were predicted to be in less advanced phases of the CASVE cycle. The CASVE cycle phases indicate tasks that should be executed in a specific order to ensure optimal career decision-making. Therefore, those who complete the phases out of order will be considered non-ideal navigators while those who complete the phases appropriately will be considered ideal navigators.

Vocational Identity

In 1955, Super used the term self-concept to identify view of oneself regarding interests, goals, and values. Nearly 30 years later, Holland assessed vocational identity as the solidification of one's career interests and goals (Holland, Daiger, & Power, 1980). Individuals high in vocational identity express signs of positive career decision-making and are responsible and hopeful (Holland, Johnston, & Asama, 1993). These individuals may easily navigate through the CASVE cycle and seek help in the execution phase when they are detailing exactly what needs to be done in order to reach their career goals and close their career gap. After the development of vocational identity, individuals are able to engage in effective career decision-making and identify occupations that satisfy elements of their vocational identity (Reardon, Lenz, Sampson, & Peterson, 2000). Individuals scoring low in vocational identity tend to have negative career thoughts, low self-esteem, and career decision-making difficulties (Holland et al., 1993). These individuals may struggle to navigate through the CASVE cycle and seek help in the beginning phases and need help articulating a career problem or collecting personal and occupational knowledge. In a sample of 91 college students, from an urban Southern university, researchers found that participants that were higher in psychological well-being also had higher vocational identity and fewer negative career thoughts (Strauser, Lustig, & Ciftçi, 2008). Thirteen percent of the variance in vocational identity was accounted for by psychological well-being. Therefore, individuals who have higher psychological well-being have more solidified interests and values (Strauser et al., 2008). Vocational identity ($\alpha = .89$) was found to be significantly correlated with decidedness, comfort, self-clarity, knowledge, and decisiveness as measured by the MVS and the

Career Decision Profile among 231 college students (age $M = 22.85$) (CDP; Jones & Lohmann, 1998; Johnson, Schamuhn, Nelson, & Buboltz, 2014). Therefore, vocational identity is an appropriate construct to confirm a measure of the career decision-making process, the CASVE-CQ. Individuals that have high vocational identity are predicted to have more decision-making capability and to be in more advanced phases of the CASVE cycle. Those who are low in vocational identity were predicted to struggle with the career decision-making process and are predicted to more likely be in less advanced phases of the CASVE cycle or show evidence of ineffectively navigating the decision-making process.

Career Commitment

While vocational identity recognizes career salience in one's life, career commitment is one's selected responsibility to their occupation (Carson & Bedeian, 1994). Farmer and Chung (1995) found that career commitment among college students was significantly predicted by support for women working, a valuing of math and science, and instrumental (dominant, assertive) self-concept. These individuals may easily navigate the career decision-making process and seek help when creating a detailed plan to close their career gap. In one study that compared managers' career commitment from a collectivistic culture and an individualistic culture found more similarities than differences (Noordin, Williams, & Zimmer, 2002). In other words, across collectivistic and individualistic cultures career commitment is valued. Carson and Carson (1998) found that in a sample of 75 hospital workers, mostly female, those who were higher in career commitment were also more emotionally intelligent which included being able to navigate the career decision-making process. Past research has found that career

commitment is highly correlated with career decision-making self-efficacy (Chung, 2002). Therefore, those high in career commitment are expected to have more effectively navigated the decision-making process.

Career Decision-Making Difficulties

While some individuals will effectively navigate the career decision-making process, others will struggle with multifaceted and complex career decisions. Career decision-making difficulties, or issues one might have that disrupt the career decision-making process, can occur throughout the career decision-making process and can stem from lack of information about the world of work to an inability to the intersection of career decisions and values (Gati et al., 1996). Those high in career decision-making difficulties may need early intervention to increase decision-making skills and goal articulation. As the world of work changes, career decision-making is increasingly seen as an integral component in one's overall long-term career path (Albion & Fogarty, 2002). In a sample of 253 undergraduate students from a southwestern university those with a high ability to deal with ambiguity have higher career decision-making self-efficacy and in turn also have lower career decision-making difficulties (Xu & Tracey, 2014). Therefore, individuals who have higher career decision-making difficulties are predicted to struggle to move through the career decision-making process and are predicted to be in the beginning phases of the CASVE cycle or show signs of ineffective navigation of the CASVE cycle.

Emerging Adulthood

The college experience often provides students with a unique experience for discovery and exploration. Individuals aged 18-25 who attend college are afforded the opportunity to more freely explore a wide variety of opportunities and postpone formally engaging in their chosen profession (Arnett, 2000). This stage of strong self-exploration is deemed emerging adulthood, and this century's college student is largely embracing this transitional phase impacting their overall career development (Arnett, 2000). This period in one's life is typically outlined by the ability to explore and decide on a career path (Arnett, 2000). Further, exploration begins to cease and instability fades as an individual pursues his or her career and adds more stable components to his or her life such as marriage and children (Arnett, 2000).

While Erikson (1950) argued that identity development happens mainly in adolescence, he also believed that industrialized societies allowed room for their youth to extend this period of time. Emerging adulthood is distinct from adolescence as it entails a host of different challenges and career development expectancies (Arnett, 2000). Further, young adulthood does not capture the essence of the transitional characteristic of emerging adulthood (Arnett, 2000). When individuals work during adolescence, the focus is not on career preparation, whereas emerging adults seek experiences that will allow them to explore their career aspirations or prepare them for their chosen occupation (Arnett, 2000). These experiences allow college students to gain firsthand knowledge about the world of work and self-knowledge surrounding work environment likes and dislikes. College students often change majors in search of a field that will prepare them for possible occupations after graduation (Arnett, 2000).

Moving from emerging adulthood to adulthood is marked by self-sufficiency which is dependent on one's chosen vocation (Arnett, 2000). Individuals in this phase of life can explore career options and then solidify their choice and create a plan of action to achieve an occupation in his or her chosen career field. Ranta, Dietrich, and Salmela-Aro (2013) found that, in a sample of 1,052 Finnish emerging adults, at age twenty, education was found to be an individual's main goal and at age twenty-three this importance was transitioned to career. Focus on finances was present throughout emerging adulthood and financial concerns frequently co-occurred with concern emphasis on education and work. In a sample of Belgian emerging adults, researchers found that as someone gets older the amount of career exploration decreases (Luyckx, Schwartz, Gossens, & Pollock, 2008). Therefore, as one progresses throughout their college years, career decision-making should become easier. In addition, when one's sense of adulthood increased participants reported higher career commitment. In a qualitative study of students who transitioned from college to the workforce, researchers found that it may be beneficial to be knowledgeable about the world of work and the expectations of various positions (Murphy, Blustein, Bohlig, & Platt, 2010). Many emerging adults engage in exploration with the hope and intention of finding a meaningful and fulfilling career (Arnett, 2004). However, when reflecting on their career decision-making experiences individuals cited formal career counseling as unhelpful and other forms of social support vital.

If career decision-making and career preparation during emerging adulthood is not navigated successfully individuals may experience difficulty finding a satisfying occupation (Arnett, 2000). Consequently, it was hypothesized that those high in the

dimensions of emerging adulthood will show signs of ineffective navigation of the CASVE cycle.

Negative Career Thoughts

In the cognitive information process theory of career development, metacognitions effect every aspect of the career decision-making process. These metacognitions refer to the thoughts one has about his or her own career decision-making, self-knowledge, and occupational knowledge. Negative career thoughts are cognitions concerning decision-making confusion, commitment anxiety, external conflict, and general career decision-making concerns (Sampson et al., 1998). Decision-making confusion encompasses the confusion one feels when attempting to navigate the career decision-making process. Commitment anxiety is the anxiety that one may feel as they struggle to make a final career decision. External conflict identifies the turmoil that one may face when receiving messages from family and significant others regarding their career decision-making. The Career Thoughts Inventory (CTI) assesses these negative career thoughts and was developed by the CIP theorists to assess the executive processing domain of the theory, as well as clients' career decision-making readiness (Sampson et al., 1998). Strauser and colleagues (2008) found that the six components of psychological well-being had significant impact on negative career thoughts, commitment anxiety, external conflict, and decision-making confusion. Participants that were higher in psychological well-being had fewer negative career thoughts (Strauser et al., 2008). Research has demonstrated that neuroticism accounts for a significant portion of variance in negative career thoughts (Kelly & Shin, 2008). In one study of 175 undergraduate students' communication apprehension was correlated with high scores of commitment

anxiety, external conflict, and decision-making confusion (Meyer-Griffith, Reardon, & Hartley, 2009). Those who are having a large amount of negative career thoughts are also likely to be apprehensive about communicating about their career problem. In addition, depression is strongly correlated with negative career thoughts and career indecision (Saunders, Peterson, Sampson, & Reardon, 2000).

It was hypothesized that those high in overall negative career thoughts will be less effective at navigating the career decision-making process and would be in the beginning phases of career decision-making. In addition, the creators of the CTI have identified items that correspond with each phase in the CASVE cycle. Therefore, it was hypothesized that the total score of the items on the CTI associated with each of the CASVE cycle phases would be highly correlated with the total score of the items, in the predicted factors, associated with each of the CASVE cycle phases on the CASVE-CQ.

Construct Connections

Vocational identity, career commitment, career decision-making difficulties, emerging adulthood, and negative career thoughts are related constructs that are each also connected to the career decision-making process. Negative career thoughts and career decision-making difficulties are highly correlated (Kleiman et al., 2004). The Career Thoughts Inventory and the Career Decision-Making Difficulties Questionnaire are both able to assess some level of career decision-making readiness and can be used to identify a variety of challenges that an individual may face through the career-decision making process (Gati et al., 1996; Kleiman et al., 2004). Holland, Daiger, and Power (1980) specified vocational identity develops in adolescence as one explores and prepares for their occupation. Due to shifting emphasis on exploration and preparation to emerging

adulthood from adolescence, vocational identity should be now developing in emerging adults and it is appropriate to assess vocational identity in college students. Diemer and Blustein (2007) found that career commitment and vocational identity were positively correlated ($r = .31$) in a sample of urban high school students. Among a group of urban high school students, it was found that among students who were not interested in career exploration or career commitment, vocational identity was less established (Ladany, Melincoff, Constantine, & Love, 1997). In addition, lower career commitment was found to be related with a higher number of occupations choices being considered. Therefore, those low in career commitment, vocational identity, and career exploration were suspected to be less advanced in the career decision-making process. Using a longitudinal research design, researchers found that young adults transitioning from high school to college become more comfortable with their career choices through times of career exploration as they establish their career identities (Stringer, Kerpelman, & Skorikov, 2011). Additionally, it was found that during the transitional period from high school to college and at the beginning of one's college career, career identity formation slows which may be due to the lack of vital career decisions that individuals are faced with during that stage. Overall, individuals who have high vocational identity and career commitment with low career decision-making difficulties, negative career thoughts, and exploration related to emerging adulthood were predicted to be the least likely to struggle with the career decision-making process.

CHAPTER III - PRESENT STUDY

The present study sought to establish the CASVE-CQ, a measure to assess an individual's standing in the CASVE cycle, a career decision-making model grounded in the cognitive information processing theory to career development. In addition, convergent and discriminant validity were assessed using five other career constructs; vocational identity, career commitment, career decision-making difficulties, dimensions of emerging adulthood, and negative career thoughts. Vocational identity and career commitment were predicted to aid in the establishment of convergent validity. Career decision-making difficulties, dimensions of emerging adulthood, and negative career thoughts were utilized to assess discriminant validity. Vocational identity, career decision-making difficulties, career commitment, and negative career thoughts were used to assess criterion validity.

Methods

Procedures

Items were developed based on past literature surrounding career decision-making, any other related literature, and review of relevant and related assessment tools for similar constructs. Items were initially created based on the most current conceptualization of the CASVE cycle after a thorough review of related measures and current literature (Sampson et al., 2004) in conjunction with brainstorming of items by a group of graduate students trained in the CIP theory and with experiencing implementing the CASVE cycle decision making process with clients. Logistically, individual items were written to address specific phases of the CASVE cycle and to address a specific aspect of the definition or typical client activities associated with that phase. The items

were then reviewed by a group of graduate students new to the theory, a group of graduate students with thorough training and experience with the theory, and an established expert. After the review, items were revised in collaboration with an expert.

After IRB approval, the process of data collection began and can be described in 4 phases. Phase 1 involved an initial seven-person pilot. In Phase 2, three experts reviewed the items and suggested direction for review. Phase 3 involved 54 traditional undergraduate students completing the CASVE-CQ in order to assess reliability. In Phase 4, 323 traditional undergraduate students completed an online web survey that included a demographic questionnaire, the CASVE-CQ, and all other study measures. Participants in each phase were ages 18-25 due to the focus of the current study on traditional college students.

In Phase 1, the items were piloted in person to seven traditional undergraduate college students to gain further feedback on content, meaning, clarity, and wording of the items. Students were asked to rate items on 5-point Likert scales from 1 (*very unclear*) to 5 (*very clear*) to assess clarity (See Appendix B). In addition, students were asked to give qualitative feedback about items, including meaning and content, and were encouraged to ask questions about the items. The in-person piloting was utilized to further establish content validity by allowing the intended sample population to give unbiased feedback about items related to a theory they are likely unfamiliar with in their studies as well as feedback about general understanding related to reading level and item wording. The in-person pilot allowed the items to be refined in terms of wording to better be understood and applied to a wide variety of individuals. The in-person pilot study was advertised on SONA, the psychology department recruitment pool.

In Phase 2, three experts then reviewed the items to elicit feedback on content, meaning, clarity, and wording of the items. Experts were selected based on experience with the cognitive information processing theory in overall theory conceptualization, research, and practice. Based on expert feedback, the items were modified. The expert reviewers were given items without any indication of which phase in the CASVE Cycle the item was created to measure (See Appendix C). These three experts were asked to place each item into the appropriate phase of the CASVE cycle to indicate the item's importance in measuring the identified phase of the CASVE cycle. Two of three expert judges must have identified an item as measuring a specific phase of the CASVE cycle in order for the item to be included in the measure unless the item was modified to be considered a better fit in a specific phase. In addition, the expert judges were asked to identify if the item is essential, useful but not essential, or not necessary (Lawshe, 1975). An IRB amendment was submitted after the qualitative feedback was incorporated into the CASVE-CQ and a final pool of items was revised. An additional pilot portion was launched to assess initial alpha values for assistance in item elimination.

In Phase 3, 54 college students, ages 18-25, completed the CASVE-CQ. For the overall CASVE-CQ, the reliability was found to be high (See Table 1). However, the subscales had low reliability. Therefore, the items were then utilized in the final phase of the study due to the high overall reliability with the understanding that items from each subscale would likely be eliminated upon final data analysis. The survey was hosted on Qualtrics, a data collection website, and connected to SONA. Students who participated in studies on SONA earned course research credit.

In Phase 4, the CASVE-CQ, all other study measures, demographic form, and informed consent were advertised on SONA. The survey was hosted on Qualtrics and linked to SONA. Students who participated in studies through SONA earned course research credit. Two separate identical web surveys were posted, one for men and one for women in an effort to achieve a more gender-balanced sample. An ideal sample would have included 50% women and 50% men. Therefore, recruitment of additional participants outside of the SONA system was utilized in an attempt to better achieve appropriate gender balance. Participants were recruited through public listservs and organizations with permission from listserv and organization leaders. In order to qualify to participate, the participants must have self-identified as college students. Participants that were recruited through public listservs and organizations had the option to enter their email into a separate Qualtrics web survey for a chance to win a \$25 Amazon online gift code. Participant response time and data were assessed to determine the validity of answers. As recommended by Meade and Craig (2012) careless responding was assessed through the insertion of two bogus validity items. The two validity items were explicit (e.g. "Answer 'disagree' to this question.") and blended into the actual measures. These two validity items identified participants that answered the survey items in a careless manner. Any participant who answered a validity item incorrectly was removed from the sample.

Participants

In Phase 1, to gather qualitative feedback on the items, the CASVE-CQ was piloted in person to 7 traditional undergraduate college students (7 female students are who registered for the pilot opportunity) at a mid-size Southern university recruited through the SONA system in the psychology department. Students received research credit for participation as denoted by their course instructors. To assess the psychometric properties of the modified CASVE-CQ, in Phase 4, a total of 323 (Female – 215, Male – 106, Unknown – 2; Age 18-25, M = 20; 61% White), traditional undergraduate college students were recruited through the SONA system in the psychology department and public listservs and organizations. Of those 323, 202 also completed the CTI (Female - 107, Male - 93; Age 18-25, M = 20; 57% White, 29% Black). Those who participated through SONA received research credit for participation as denoted by their course instructors and those who participated from public listservs and organizations had the option to enter their email in a separate web survey for a chance to win a \$25 Amazon online gift code. Three hundred twenty-three students were recruited to perform an exploratory factor analysis. For an exploratory factor analysis, five to ten participants are needed per item (Stevens, 2002). Therefore, 60 items were retained after all item revisions in order to obtain five or more participants per item (see appendix D).

Instruments

Participants completed the CASVE–CQ, My Vocational Situation (MVS; Holland et al., 1980), Career Decision-Making Difficulties Questionnaire (CDDQ; Gati et al., 1996), Career Commitment Measure (CCM; Carson & Bedeian, 1994), the Inventory of the Dimensions of Emerging Adulthood (IDEA; Reifman et al., 2007), a brief

demographic questionnaire, and 202 of the participants also completed the Career Thoughts Inventory due to cost of the measure (Sampson et al., 1998). A brief demographic questionnaire was included during the piloting and subsequent administration of the CASVE-CQ in order to assess participant demographic characteristics.

The proposed *CASVE Cycle Questionnaire (CASVE-CQ)* included 55 yes-no items that assess each phase (Communication including beginning and ending, Analysis, Synthesis, Valuing, and Execution) of the CASVE cycle (see Appendix E). Scores for each of the subscales were calculated by summing the total number of items answered with yes. Higher total scores indicated higher completion of the CASVE cycle phases and are continuous, referred to as the Total Score in the Analysis section of this document. Individuals who have endorsed fifty percent or more items in a specific phase were considered to have successfully accomplished that phase. Following the cognitive information process theory to career development, individuals must have accomplished each preceding phase before their current phase. Individuals who have not completed each preceding phase before their current phase, or are ineffective CASVE cycle navigators, were considered non-ideal navigators of the CASVE cycle. Those who have completed each preceding phase before their current phase were considered ideal navigators of the CASVE cycle. In addition, each individual was identified as an ideal or non-ideal CASVE cycle navigators, referred to as the Navigator Score in the Analysis section of this document.

The My Vocational Situation (MVS; Holland et al., 1980) Vocational Identify (VI) subscale was used to assess vocational standing. The VI subscale consists of 18 true-

false items and was scored by adding the total number of false answers endorsed with a total possible score of 18. Higher total scores indicated higher vocational maturity which was used in this study. The VI subscale included items such as “No single occupation appeals to me strongly.” In a sample of college students and workers, Holland, Daiger, and Power (1980) used the Kuder-Richardson 20 and found the reliability for VI to be .86. Among a sample of high school students, internal consistency was found to be $\alpha = .76$ (Diemer & Blustein, 2007). Holland and colleagues (1993) compiled over 50 studies and provided evidence of strong construct validity and moderate signs of test-retest reliability.

The Career Decision-Making Difficulties Questionnaire (CDDQ; Gati et al., 1996) is a 34-item ipsative measure that assesses the difficulties that individuals may have before and during the career decision-making process. The CDDQ contains three subscales including readiness, lack of information, and inconsistent information. The items were rated on a 9-point scale from 1 (*does not describe me*) to 9 (*describes me well*). The overall score, used in this study, was derived by averaging the 10 subcategory scores with higher scores which indicated more career decision-making difficulties. Items included “work is not the most important thing in one’s life and therefore the issue of choosing a career doesn’t worry me much” and “I find it difficult to make a career decision because I don’t know how to combine the information I have about myself with the information I have about the different careers” (Gati et al., 1996). In a sample of 304 American college students (ages 17-23), a coefficient alpha of .95 was obtained for the total questionnaire’s internal consistency (Gati et al., 1996). Construct validity was found when 450 American college students completed the CDDQ, the Career Decision Scale

(Osipow, Carney, & Brock, 1976), and the Career Decision-Making Self-Efficacy Scale (Taylor & Betz, 1983). For the CDDQ and the CDS, the correlation was .77 and the correlation for the CDDQ and the CDMSES was negatively correlated ($-.50, p < .001$) (Osipow & Gati, 1998).

The 12-item *Career Commitment Measure* (CCM; Carson & Bedeian, 1994) assesses an individual's connection to their profession. The CCM consists of three subscales Career Identity, Career Planning, and Career Resilience with maximum total scores of 20 on each and a maximum total scale score of 60. The answers range from 1 (*strongly disagree*) to 5 (*strongly agree*). A high total score on this measure indicated more commitment to one's career. The total score was used in this study. The CCM includes items such as "My line of work/career field is an important part of who I am." The coefficient alphas for the 12 items in the CCM ranged from .79 to .85 (Carson & Bedeian, 1994). Convergent validity was established using Blau's (1985) career commitment measure with a correlation of .75 (Carson & Bedeian, 1994). When assessing construct validity, Carson and Bedeian (1994) found that years of education was positively correlated with career commitment ($r = .18$) and negatively correlated with organization commitment ($r = -.05$).

The 31-item *Inventory of the Dimensions of Emerging Adulthood* (IDEA; Reifman et al., 2007) assesses the period in one's life where they are too young to be considered adults and too old to be considered adolescents (Arnett, 2000). Further, this period of time is marked by self-identification. The IDEA consists of six subscales: Identity Exploration, Experimentation/Possibilities, Negativity/Instability, Other-Focused, Self-Focused, and Feeling "In-Between." The answers range from 1 (*strongly*

disagree) to 4 (*strongly agree*). Higher scores are indicative of strong presence of the characteristics associated with emerging adulthood. All items begin with “Is this period of your life a...” For example, one item from the Experimentation/Possibilities subscale is “Is this period of your life a time of exploration?” Internal consistency for the subscales is between .70 and .85. Test-retest reliabilities for the subscales, with a one-month interval, were between .64 and .76 except for feeling in-between subscale which had a reliability of .37 (Reifman et al., 2007).

The Career Thoughts Inventory (CTI; Sampson et al., 1998) assesses negative career thoughts yielding a total score and three subscales including Decision-Making Confusion (DMC), Commitment Anxiety (CA), and External Conflict (EC). The total score indicates greater negative career thoughts and was used in the present study. In addition, the items identified by the authors that correspond with the phases in the CASVE cycle were used to assess their relationship with the phases of the CASVE cycle identified in the CASVE-CQ subscales. In a sample of college students, the internal consistency for the measure was .96 (Sampson et al., 1996a). Answers range from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*). One item from the CTI is “My interests are always changing.” After a four-week period, the test-retest reliability was .86 (Sampson et al., 1996a). The CTI and CDDQ are positively correlated ($r = .82$) (Kleiman et al., 2004). The CTI and MVS are negatively correlated ($r = -.76$) (Saunders et al., 2000). Walker and Peterson (2012) mapped the three subscales of the CTI onto the CASVE cycle stating that commitment anxiety is related to the execution phase, external conflict is connected to the valuing phase, and decision-making confusing is linked through the communication, analysis, and synthesis phases.

Research Questions and Hypotheses

Research Question 1: Will the originally proposed items of the CASVE-CQ yield a five-factor structure of accurately measure the CASVE cycle as described in the cognitive information processing theory?

Hypothesis 1: Factors matching each of the CASVE cycle phases will be explored and established based on exploratory factor analysis and past scientific knowledge.

Research Question 2: Will there be sufficient convergent and discriminant validity evidence for the CASVE-CQ?

Hypothesis 2: The VI subscale from the MVS will provide convergent validity with the total score of the CASVE-CQ through a positive correlation.

Hypothesis 3: The CDDQ will provide discriminant validity with the total score of the CASVE-CQ through a negative correlation.

Hypothesis 4: The CCM will provide convergent validity with the total score of the CASVE-CQ through a positive correlation.

Hypothesis 5: The IDEA will provide discriminant validity with the total score of the CASVE-CQ through a negative correlation.

Hypothesis 6: The CTI will provide discriminant validity with the total score of the CASVE-CQ through a negative correlation.

Hypothesis 7: The items on the CTI assessing phases of the CASVE cycle will strongly negatively correlate with items assessing each phase, in the predicted factor structure, of the CASVE cycle on the CASVE-CQ.

Research Question 3: Do ideal and non-ideal navigators differ in vocational identity, career decision-making difficulties, career commitment, dimensions of emerging adulthood, and negative career thoughts?

Hypothesis 8: Ideal navigators will score higher on the VI subscale of the MVS than non-ideal navigators.

Hypothesis 9: Ideal navigators will score lower on the CDDQ than non-ideal navigators.

Hypothesis 10: Ideal navigators will score higher on the CCM than non-ideal navigators.

Hypothesis 11: Ideal navigators will score lower on the IDEA than non-ideal navigators.

Hypothesis 12: Ideal navigators will score lower on the CTI than non-ideal navigators.

Analysis

After the sample was obtained, in Phase 4, an exploratory factor analysis using principal axis factoring with a direct oblimin oblique rotation was conducted to extract factors. Skewness and kurtosis were assessed in order to determine the extent of normality achieved among dichotomous, or yes-no, individual item responses. In order to determine the number of factors to extract, eigenvalues (Kaiser, 1958), Cattell's scree test (Cattell, 1966), parallel analysis (Horn, 1965), minimum average partial (Velicer, 1976), and established cognitive information processing theory theoretical knowledge were utilized. It was predicted that because the CASVE cycle has five phases, five factors would be extracted. However, because the CASVE cycle phases are cyclical in nature, the communication phase involves tasks that are completed at the beginning and end of the CASVE cycle. Therefore, it was predicted that six factors may emerge and remain consistent with the theory. A reliability analysis was conducted to determine alpha coefficients, inter-item correlations, and item-total correlations of each subscale

(Appendix G). Convergent and discriminant validity were assessed through correlational analyses of the relationships between the CASVE-CQ Total Score and the MVS, CDDQ, CCM, IDEA, and CTI scores. Additional analyses were conducted using multiple analyses of variance to differentiate the relationships between non-ideal and ideal navigators (the Navigator Score) and the MVS, CDDQ, CCM, and CTI to establish criterion validity. An analysis of variance was conducted to differentiate the relationships between the Navigator Score and the IDEA.

Results

Phase 3 of the CASVE-CQ provided an acceptable reliability coefficient for the overall measure ($N = 54$; 9 M, 45 F; Age 18-25, $M = 19.85$). While the CASVE-CQ subscales did not provide acceptable reliability coefficients, the final phase of the study was completed with the understanding that some items from each subscale would be eliminated based on the exploratory factor analysis. Due to missing data, a differing amount of participants completed items on each of the CASVE-CQ subscales and can be seen in Tables 1 and 4. Table 2 describes the eigenvalues of each factor as well as the variance each factor explains. Items were first deleted for all loadings below .25 and items 10A, 6A, and 2V were eliminated. Second, items were removed for loadings greater than .25 on more than one factor and items 4C, 3A, 5V, and 6V were removed. Third, items with loadings between .25 and .30, which included 2C, 11A, and 1V were taken out. However, due to priority of item retention, especially as it aligns with theory, items 2C, 4C, 3A, 11A, 5V, 6V were retained due to the item loading with the factor and corresponding phase that it was initially developed for or the factor where similarly worded items in original development loaded. Last, 10C was eliminated due to the item's

influence in reducing the reliability of factor 6. Factor loadings are detailed in Table 3. Factor 1 was identified as Execution, factor 2 as Analysis, factor 3 as Synthesis, factor 4 as Communication 2, factor 5 as Valuing, and factor 6 as Communication 1. Tabachnick and Fidel (2001) recommend that each item should have a factor loading of at least .32. Therefore, while items were retained with loadings below .32, revision of item wording and additional item generation is expected before a confirmatory factor analysis.

Table 1

CASVE-CQ Pilot Reliability Analysis

	N	α
CASVE-CQ	50	0.85
Communication	54	0.42
Analysis	52	0.49
Synthesis	53	0.62
Valuing	53	0.64
Execution	54	0.43

Minimum average partial suggested six factors were appropriate (Velicer, 1976), the scree test suggested seven factors (Cattell, 1966), parallel analysis suggested up to ten factors (Horn, 1965), and theory suggested five or six factors. An exploratory analysis was conducted in Phase 4 and it was determined that a six factor structure best represented the data and incorporated a theoretical foundation (see Appendix E). The six factor structure represents each phase of the CASVE cycle including a second portion of the communication phase which allows a person to reassess their career decision. In Phase 4, the final CASVE-CQ resulted in 55 items with the number of items loading on

each subscale as follows: Communication 1 - 4, Analysis - 10, Synthesis - 14, Valuing - 5, Execution - 14, and Communication 2 - 8. Table 4 includes the CASVE-CQ Phase 4 reliability analysis, item-total correlations, means, and standard deviations.

Table 2

CASVE-CQ Initial Eigenvalues and Variance Explained

	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
Factor 1	13.65	22.75	22.75
Factor 2	3.44	5.74	28.49
Factor 3	2.62	4.32	32.87
Factor 4	2.37	3.95	36.83
Factor 5	2.06	3.44	40.27
Factor 6	1.61	2.69	42.96
Factor 7	1.43	2.39	45.36
Factor 8	1.43	2.38	47.74
Factor 9	1.33	2.21	49.96
Factor 10	1.21	2.01	51.98

Table 3

*Summary of Exploratory Factor Analysis Results for the CASVE Cycle Questionnaire
Using Pattern Matrix (N=323)*

Item	Factor Loadings					
	Execution	Analysis	Synthesis	Communication 2	Valuing	Communication 1
♦1C. I know what steps it would take to	0.415	0.151	0.078	0.253	0.225	0.036

achieve my career goals.						
♦1A. I am aware of my career values.	0.498	0.005	0.091	0.015	0.084	0.003
♦2A. I am aware of my skills.	0.392	0.086	0.120	0.03	0.182	0.15
♦12A. I am familiar with the types of experiences I must gain in order to achieve my career goal.	0.458	0.045	0.245	0.051	0.016	0.023
7V. I know how my career choice will fit into my life.	0.365	0.146	0.061	0.062	0.249	0.119
8V. I can easily rank order the career or job options I am considering.	0.339	0.076	0.218	0.251	0.052	0.092
♦1E. I can imagine the steps needed to accomplish my career goals.	0.62	0.045	0.113	0.052	0.05	0.098

♦2E. I will know when I have reached my career goals.	0.365	0	0.027	0.069	0.061	0.034
♦3E. I am ready to take the necessary steps to reach my career goal.	0.426	0.015	0.017	0.046	0.053	0.03
5E. I know the steps I need to take in order to reach my career goal.	0.54	0.052	0.122	0.184	0.149	0.044
♦6E. I am taking the necessary steps to reach my career goal.	0.566	0.046	0.096	0.165	0.088	0.033
♦7E. I am in the process of achieving my career goals.	0.434	0.055	0.08	0.219	0.124	0.101
9E. I know what I will need to be doing in six months from now in order	0.627	0.009	0.135	0.055	0.054	0.185

to reach my career goal.						
10E. I have a plan of action to achieve my career goal.	0.709	0.071	0.026	0.038	0.06	0.168
8C. I am unsure where to begin to solve my career problem.	0.005	0.491	0.104	0.26	0.02	0.17
5A. I need help identifying my career options.	0.206	0.421	0.159	0.049	0.172	0.251
8A. I need more information about my career options.	0.149	0.426	0.092	0.01	0.202	0.161
9A. I need more information about myself before I can find solutions to my career problem.	0.019	0.507	0.063	0.09	0.084	0.275

8S. I am						
having						
difficulty						
narrowing						
down the best						
career or job						
options for						
me since						
there are so						
many.	0.046	0.486	0.051	0.213	0.014	0.128
11S. I do not						
have enough						
information						
to compare						
my career or						
job options						
accurately.	0.143	0.55	0.158	0.156	0.125	0.018
4V. I do not						
understand						
how to						
balance my						
career goals						
and family						
goals.	0.034	0.474	0.005	0.029	0.21	0.102
9V. I have						
not						
considered						
my family						
when						
thinking						
about my						
career						
problem.	0.096	0.503	0.08	0.102	0.159	0.065

4E. I still need to outline a plan to reach my career goals.	0.294	0.392	0.003	0.121	0.193	0.114
8E. I am unsure of a good timeline for achieving my career goal.	0.234	0.464	0.002	0.025	0.073	0.142
3A. I can list my career options.	0.342	0.097	0.423	0.02	0.133	0.054
♦4A. I am aware of the way I make decisions about my career.	0.256	0.049	0.319	0.035	0.035	0.121
♦7A. I have thought about how well I can use my skills in the career options I am considering.	0.011	0.104	0.329	0.053	0.047	0.174
11A. I know the strengths and weaknesses of each of my career	0.278	0.151	0.283	0.134	0.131	0.041

options based						
on my own						
career values.						
1S. There is						
one career						
choice that I						
prefer, but I						
also have						
other options						
if my first						
choice						
doesn't work						
out.	0.045	0.032	0.346	0.241	0.021	0.054
2S. I have						
thought about						
3-5 options						
that would						
allow me to						
achieve my						
career goals.	0.082	0.102	0.531	0.099	0.001	0.026
3S. I am						
currently						
exploring all						
of my						
possible						
career						
options.	0.01	0.116	0.355	0.035	0.022	0.003
4S. I am able						
to identify						
many career						
or job options						
that match						
my values.	0.044	0.06	0.753	0.047	0.041	0.022

5S. I am able						
to identify						
multiple jobs						
that match						
my career						
interests.	0.117	0.058	0.724	0.023	0.093	0.043
6S. I am able						
to identify						
multiple						
career						
options that						
match my						
career-related						
skills.	0.092	0.088	0.748	0.042	0.094	0.016
7S. I have						
explored a						
large amount						
of career or						
job options						
and then						
narrowed						
those down to						
a few that I						
feel good						
about.	0.129	0.012	0.448	0.059	0.143	0.063
9S. I can						
narrow my						
career or job						
options to a						
few that I am						
seriously						
considering.	0.076	0.078	0.31	0.235	0.044	0.018

10S. I am						
able to						
compare my						
career or job						
options based						
on						
information I						
have gathered						
about them.	0.232	0.121	0.411	0.128	0.073	0.003
5V. I have						
compared the						
advantages						
and						
disadvantages						
and benefits						
associated						
with each of						
my career						
options.	0.332	0.125	0.305	0.011	0.061	0.129
2C. I feel that						
I am where I						
want to be in						
my career						
development.	0.182	0.022	0.087	0.296	0.236	0.013
5C. I am						
confident in						
my career						
decision.	0.097	0.075	0.054	0.611	0.018	0.226
6C. I have						
chosen a						
career or job						
option that						
best solves	0.034	0.026	0.06	0.648	0.034	0.097

my career						
problem.						
7C. I have						
chosen the						
career that is						
best for me.	0.015	0.009	0.005	0.767	0.048	0.047
♦9C. I have						
chosen a						
career option						
that						
incorporates						
my career						
interests.	0.004	0.035	0.038	0.584	0.031	0.049
12C. I feel						
less anxiety						
now that I						
have made a						
decision						
about my						
career.	0.105	0.02	0.029	0.322	0.018	0.27
♦10V. I have						
chosen a						
career or job						
option that						
incorporates						
my career						
values.	0.275	0.118	0.106	0.368	0.17	0.9
♦14V. I have						
selected the						
best choice,						
for me, from						
my career or						
job options.	0.195	0.023	0.038	0.405	0.171	0.168

♦3V. The career options I am considering satisfy my career values.	0.07	0.131	0.027	0.218	0.325	0.032
♦6V. I have considered my career in relation to other life roles (e.g. family, work, leisure, spirituality).	0.337	0.12	0.092	0.066	0.422	0.132
11V. My significant other will be satisfied with my career choice.	0.045	0.053	0.082	0.034	0.402	0.013
♦12V. My family will be satisfied with my career choice.	0.057	0.038	0.098	0.101	0.492	0.026
♦13V. I know my career choice will be an enjoyable aspect of my life.	0.21	0.129	0.038	0.405	0.171	0.168
3C. I feel a lot of	0.123	0.071	0.005	0.015	0.032	0.698

pressure to						
make a career						
decision.						
4C. It is hard						
for me to						
identify						
solutions to						
my career						
problem.	0.003	0.095	0.066	0.132	0.032	0.451
11C. The						
amount of						
effort it takes						
to make a						
career						
decision is						
overwhelmin						
g.	0.033	0.203	0.029	0.322	0.018	0.27
13C. I						
struggle with						
thinking						
about my						
future.	0.042	0.179	0.043	0.032	0.046	0.539
10C. I no						
longer feel						
pressured to						
make any						
decisions						
about my						
career.						
♦10A. I know						
what is	0.045	0.040	0.148	0.277	0.460	0.053
important to						
me.	0.161	0.205	0.118	0.176	0.131	0.041

♦6A. I have						
thought about						
how well the						
career or job						
options I am						
considering						
satisfy my						
interests.	0.091	0.232	0.163	0.064	0.162	0.241
1V. I have						
talked to my						
family about						
my career						
problem.						
2V. I have						
talked to my						
significant	0.003	0.395	0.066	0.132	0.32	.0451
other about						
my career						
problem.	0.018	0.144	0.122	0.03	0.087	0.286

Note: Factor loadings for the item's designated factor in bold. ♦ designates items with problematic skewness and/or kurtosis.

Table 4

*CASVE-CQ Reliability Analysis, Mean, Standard Deviation, and Average Item-Total**Correlations*

	N	α	# of Items	M	SD	Average Item-Total Correlation
CASVE-CQ	321	0.93	55	41	10	.46
Communication – Factor 6	322	0.76	4	1.8	1.5	.76
Analysis – Factor 2	323	0.84	10	6.0	3.0	.64
Synthesis – Factor 3	323	0.85	14	11	3.2	.55
Valuing – Factor 5	322	0.59	5	4.4	.93	.61
Execution – Factor 1	323	0.86	14	12	2.8	.70
Communication – Factor 4	322	0.83	8	6.0	2.2	.68

In Phase 4, convergent and discriminant validity were established between the CASVE-CQ and the vocational identity subscale of the MVS, CDDQ, CTI, CCM, and CTI items that are related to each CASVE-CQ subscale (see Tables 5 and 6). The total CASVE-CQ score was moderately to strongly correlated with each phase of the CTI CASVE cycle items adding evidence to the rationale behind the CASVE-CQ's creation as grounded in cognitive information processing theory. Communication 1 may have a higher correlation with the Communication items on the CTI because they address the typical early communication. While it makes sense that the CASVE-CQ subscale Analysis correlates high with the CTI Analysis items, all other subscales, excluding Communication 1 and Valuing, and the overall measure also correlate highest with the CTI Analysis items. Additionally, the Synthesis and Valuing subscales of the CASVE-CQ are the least correlated overall with the CTI items. Overall, moderate correlations

were found between each of the CASVE-CQ subscales and CTI CASVE items.

Reliability was moderate to high for each of the measures utilized for validity purposes (see Table 7). Based on non-significant correlations between the CASVE-CQ and the IDEA (see Table 5), convergent validity was not established with the IDEA.

Table 5

Correlations Among Scale Total Scores

	CASVE-CQ	MVS	CCM	CDDQ	IDEA	CTI
CASVE-CQ	-					
MVS	.68**	-				
CCM	.51**	.49**	-			
CDDQ	-.60**	-.69**	-.43**	-		
IDEA	-.01	-.02	.06	.08	-	
CTI Total	-.64**	-.70**	-.55**	.61**	.04	-

Notes. ** $p < .01$.

Table 6

Correlations Among CASVE-CQ Subscales and Phase Corresponding CTI Items

	CTI - C	CTI - A	CTI - S	CTI - V	CTI - E
CASVE-CQ	-.63**	-.63**	-.59**	-.51**	-.57**
CASVE-CQ Communication1	-.60**	-.56**	-.54**	-.54**	-.57**
CASVE-CQ Analysis	-.54**	-.56**	-.49**	-.40**	-.47**
CASVE-CQ Synthesis	-.35**	-.36**	-.35**	-.25**	-.34**
CASVE-CQ Valuing	-.36**	-.37**	-.41**	-.35**	-.32**
CASVE-CQ Execution	-.50**	-.51**	-.47**	-.40**	-.46**
CASVE-CQ Communication2	-.49**	-.50**	-.46**	-.43**	-.44**

Notes. ** $p < .01$.

Table 7

Career Related Measures Reliability Analysis

	N	α
CTI	199	0.97
CCM	323	0.88
IDEA	321	0.91
CDDQ	301	0.94
MVS	323	0.89

A multivariate analysis of variance was conducted and it was found that there was a statistically significant difference ($F(5, 187) = 45.35, p < .0005$; Wilk's $\Lambda = 0.452$, partial $\eta^2 = .54$) in scores on the vocational identity subscale of the MVS, CDDQ, CTI Total Score, and CCM based on the Navigator Score (see Table 8). Box's M was significant indicating a violation of the assumption of equal group covariance. Therefore, the results are not robust should be interpreted with caution (Tabachnick & Fidell, 2001). Univariate analyses of variance indicated the vocational identity subscale ($F(321,1) = 13.2, p < .001$) and CDDQ ($F(299,1) = 18.5, p < .001$) each have statistically significant differences based on the Navigator Score while the CTI Total Score ($F(197,1) = 3.2, p = .071$) and CCM ($F(321,1) = 1, p = .312$) did not have statistically significant differences. Therefore, follow-up ANOVAs suggested the vocational identity subscale of the MVS and CDDQ were best able to differentiate between ideal and non-ideal navigators. Discriminant analysis was used to conduct a multivariate analysis of variance test to better explore if the vocational identity subscale of the MVS (Wilk's $\Lambda = 0.602$), CDDQ (Wilk's $\Lambda = 0.740$), CTI Total Score (Wilk's $\Lambda = 0.726$), and CCM (Wilk's $\Lambda =$

0.828) would predict the Navigator Score ($F(4, 103) = 25.75, p < .001$; Wilk's $\Lambda = 0.581$; Canonical Correlation = .648). The discriminant function canonical analysis suggested the identity subscale of the MVS was best able to differentiate between ideal and non-ideal navigators. An analysis of variance was conducted using the IDEA and there was no statistically significant difference between ideal and non-ideal navigators.

Overall, a factor structure founded in theory was established along with both convergent and discriminant validity. Additionally, validity was established through exploration of differences between ideal and non-ideal navigators of the CASVE cycle using the Navigator Score. The IDEA did not support convergent validity for the CASVE-CQ.

Table 8

Descriptive Statistics of Navigator Score from Multivariate Analysis of Variance

Measure	N	Ideal Navigator		Non-Ideal Navigator	
		M	SD	M	SD
CDDQ	194	95.7	32.0	142.5	45.5
CTI		75.4	19.2	103.2	25.5
MVS		31.9	3.6	25.0	4.8
CCM		47.4	7.3	40.5	7.8

Table 9

Descriptive Statistics of Navigator Score from Analysis of Variance

Measure	Ideal Navigator			Non-Ideal Navigator	
	N	M	SD	M	SD
CDDQ	301	95.0	32.0	142.9	45.3
CTI	199	75.5	19.2	103.1	25.3
MVS	323	31.9	3.45	25.1	4.54
CCM	323	47.2	7.89	39.57	8.86

Table 10

Standardized Canonical Discriminant Function Coefficients

Measure	Coefficient
MVS	0.712
CDDQ	-0.197
CTI	-0.166
CCM	0.144

CHAPTER IV – DISCUSSION

The CASVE-CQ is a measure used to assess an individual's standing in the Cognitive Information Processing Theory-based CASVE cycle (Sampson et al., 2004) as well as a measure of an individual's progress in making a career decision. In developing this measure, the hope is to provide practitioners with a tool they can use to more quickly assess client career decision making progress, as well as guide the selection of interventions or other beneficial resources. The CASVE-CQ is suitable for group administration and could be utilized as a screener to assess career decision-making progress in a large group of individuals. Subsequently, those who need career counseling services could be identified and be provided with resources for assistance and engaged in a discussion surrounding specific tasks that may assist career decision-making. The CASVE-CQ's phase assessment component could allow practitioners to check their assumptions about client's career decision making progress, especially in instances where clients are executing a decision without having fully considered the decision (e.g., a client has completed most tasks in the CASVE-CQ Execution subscale but few of the tasks indicated in the CASVE-CQ Synthesis subscale). Results could highlight to practitioners that a client needs to return to consider earlier phases of the decision-making process before acting on a decision. Researchers can utilize the CASVE-CQ to better understand the relationship between career decision-making progression and other constructs such as career decision-making difficulties, negative career thoughts, career decision-making self-efficacy, and vocational identity. Additionally, because the measure provides utility to both practitioners and researchers, the gap between research and practice may begin to close as research phenomena can more quickly be applied and utilized in practice.

The total score of the CASVE-CQ assesses how much progress one has made in the career decision-making process with a higher total score meaning more progress. Each subscale score assesses how much progress an individual has made in each phase of the CASVE cycle. In order to better identify areas that may need more work, an individual will be considered to have successfully navigated each phase by having completed at least 50% of the tasks in each subscale. Due to the exploratory nature of the study, 50% was chosen as a starting point to assess an individual's level of phase completion. However, due to the differing number of items in each subscale, it is difficult to ascertain whether or not 50% is a meaningful designation of completed items. Future analyses should focus on further establishing the CASVE-CQ through exploration of a more refined method of scoring to determine ideal and non-ideal navigators.

Items for the CASVE-CQ were originally developed for specific phases of the CASVE cycle. In the exploratory factor analysis, 19 items did not align with their intended factor. Yet, these items all moved to factors that can conceptually still support the cognitive information processing theory (see Appendix E). The item "I am aware of my skills" was originally created for the analysis phase of the CASVE cycle which focuses on the development of awareness of an individual's values, interests, and skills. After the factor analysis, the item loaded onto the factor explained by the execution phase of the CASVE cycle which can still be conceptualized through theory because an individual must hold awareness of their skills in order to be at the end of the CASVE cycle and make effective plans for their career decision. Similarly, the item "I still need to outline a plan to reach my career goals" was developed for the execution phase of the CASVE cycle but after factor analysis was found to be a better fit in the analysis phase

due to its involvement with the early career decision-making process of increasing awareness in the analysis phase.

When assessing the reliability of the CASVE-CQ in Phase 4, it was found that each of the reliability coefficients were at or above acceptable aside from Valuing (see Table 4) suggesting that Valuing may be an unstable portion of the CASVE-CQ. Many items that were created for the Valuing subscale aligned better with other subscales after conducting the exploratory factor analysis. Further, the valuing phase of the CASVE cycle often readdresses areas of earlier exploration in the analysis and synthesis phases of the CASVE cycle suggesting it may be difficult to differentiate between the analysis, synthesis, and valuing phases of the CASVE cycle with the current item wording. One reason the Valuing subscale of the CASVE-CQ may not be as reliable is due to the content assessed by the items developed from the Valuing subscale. Valuing tasks tend to overlap with tasks associated with several other CASVE phases as the Valuing phase involves differentiating between options as generated by each of the previous phases. Overall, the reliability of the CASVE-CQ indicating that the measure's items are acceptably assessing the same construct.

Gender balance is a strength of this study. Due to the recruitment methods utilized and the fact that, a majority of the participants were recruited through the Department of Psychology's subject pool, most of the participants were female. Of the 323 participants who completed Phase 4, 107 were male. Therefore, while the majority of the participants were still female, the gender disparity was not sizable and the analyses could be a more statistically accurate reflection of the measure's function in both females and males.

Further, The University of Southern Mississippi's Office of Institutional Research (2016) stated a similar number of females are enrolled in the university overall.

Initial support for the validity of the CASVE-CQ was provided through comparisons of CASVE-CQ scores with scores from various career-related measures. The CASVE-CQ was moderately correlated with the vocational identity subscale of the My Vocational Situation (MVS), Career Commitment Measure (CCM), Career Decision-Making Difficulties Questionnaire (CDDQ), and the Career Thoughts Inventory (CTI). The CTI and the CDDQ were both negatively correlated meaning that those who have completed more CASVE-CQ based decision-making tasks had less negative career thoughts and fewer career decision-making difficulties. Those who have completed more decision-making tasks have higher vocational identity and career commitment. Since the CASVE-CQ correlates moderately with each of these measures, the CASVE-CQ is assessing a career-related construct of decision-making while also determining a unique aspect, completion of career decision-making tasks. The CTI CASVE cycle items and the total CASVE-CQ were strongly to moderately correlated, indicating that the CASVE-CQ is a highly related, as would be anticipated being based in the same theory, but distinct measure. Communication 2, Analysis, Synthesis and Execution subscales of the CASVE-CQ were highly correlated with the CTI Analysis items indicating that each of these phases likely assess portions of self-knowledge and occupational knowledge. The CASVE-CQ subscales, Synthesis and Valuing, while still moderately correlated, were the least correlated with the CASVE cycle items of the CTI. Since these are the phases where one narrows their options, and ultimately make a decision between options, this could suggest that these subscales are assessing portions of the CASVE cycle not captured by

the CTI CASVE cycle items. Overall, moderate validity evidence was found for the CASVE-CQ through correlational analyses and a MANOVA with follow-up ANOVAs and discriminant analysis. Areas for concern including low reliability of the Valuing subscale and results from the MANOVA and follow-up analyses, which violated the equality of covariance matrices assumption and should be interpreted with caution, indicated that the vocational identity subscale of the MVS best discriminated between ideal and non-ideal navigators. Additionally, multiple items were retained due to their ability to increase reliability, to add items to factors with few items, or because items had a solid theoretical foundation. Further development of these items, likely in the form of rewording, would increase the validity of the CASVE-CQ.

The IDEA is a measure used to assess one's level of exploratory activity in emerging adulthood, a specified stage of life. The measure has not been utilized in the career literature and therefore, the relationship of the IDEA and other utilized measures was predicted based on the general idea of emerging adults as the population utilized in this study. However, although the IDEA had high reliability, it was not found to be significantly related to the CASVE-CQ or any other measures and was unable to provide statistically significant evidence of differences between ideal and non-ideal navigators using the Navigator Score. While the IDEA may be able to provide information about some aspects of emerging adulthood, it does not appear that it is related to the career variables utilized in this study. The IDEA assesses one's interest in exploring various aspects of an individual's life, including experiences related to personal and professional growth that may or may not be rewarding to the individual, whereas the CASVE-CQ assesses one's ability to complete tasks related to career decision-making without

judgment related to the overall success or value of each task. For example, an individual could complete many career decision-making tasks but could still have difficulty with one or more subscales on the CASVE-CQ.

Limitations and future research

While the scope of this study was traditional college students between the ages of 18-25, the CASVE cycle is meant to be utilized repeatedly throughout the lifespan. Therefore, future research could focus on a broader age range and include individuals in the workforce. Workman (2015) found that college students valued, and sometimes relied on, their parents' input for career decisions. However, the importance of parental guidance likely becomes less salient as one ages. The majority of the sample was obtained from a mid-size Southern university which could indicate regional bias. Therefore, in the future, the CASVE-CQ should be studied among a more diverse sample. In regards to multiculturalism, it is difficult to develop a measure that assesses the unique aspects one must consider as they move through the decision-making process particularly in regards to minority populations (i.e. affectional orientation, race, ethnicity, etc.). Indeed, Harris (2014) found that students who identified as Black and queer had difficulty identifying that their minority identities affected their career decision-making, but when asked questions related to career decision-making themes of minority identities emerged. In the future, studies could assess the ability of the CASVE-CQ to assist the career decision-making needs of individuals with minority or multiple diverse identities. Furthermore, some items involve terms such as family or partner which may penalize individuals for which these items do not apply by indicating that they have not completed the suggested number of tasks in a specific phase. Practitioners are encouraged to gather

qualitative information to better understand the career decision-making process of each individual.

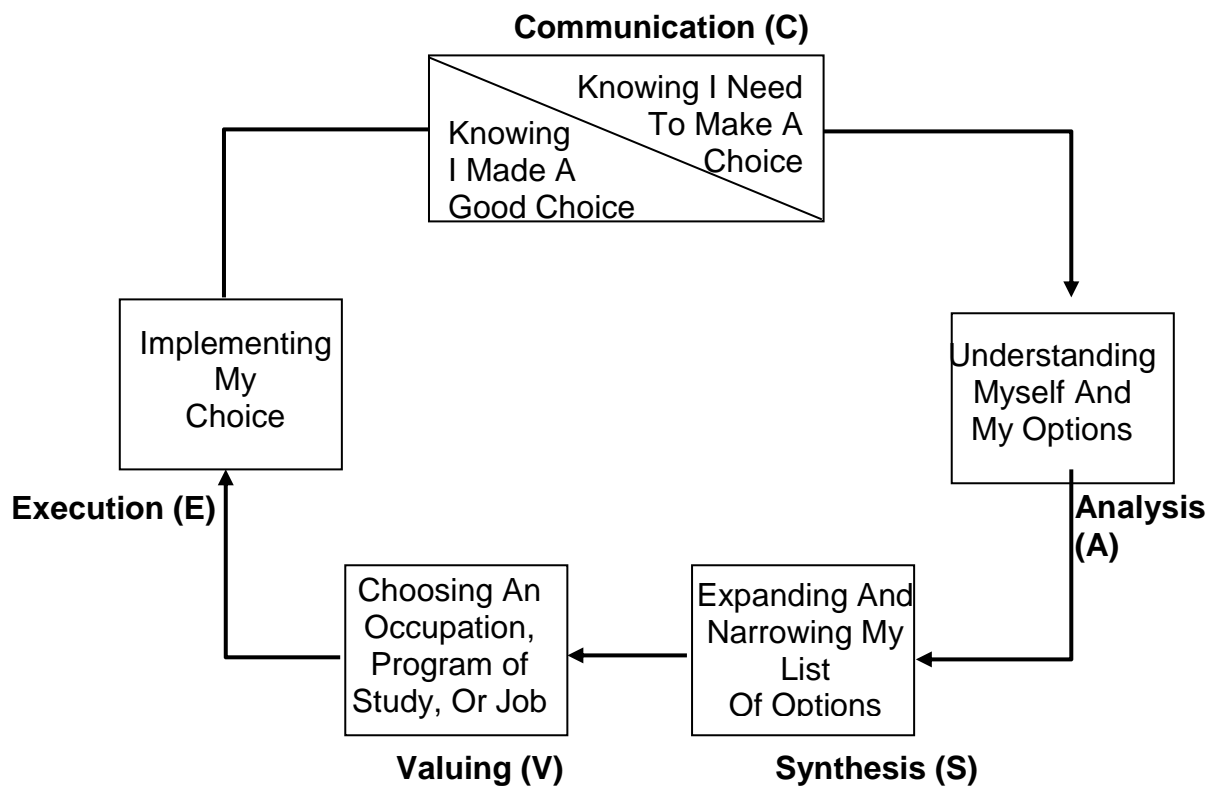
Future studies to further develop the CASVE-CQ should focus on advancing the psychometric properties of the measure. Specifically, in order to improve reliability and validity of the measure, more populations, other than traditional college students, should be utilized in assessing the CASVE-CQ's utility. Further, specifically focusing on the Valuing and Communication 1 subscales, additional items could be created and existing items could be worded in order to increase validity of these subscales and the overall CASVE-CQ. A confirmatory factor analysis should be conducted using the CASVE-CQ items in order to add evidence to the stability of the factor structure after revision and addition of items. Additionally, in order to clarify a useful threshold for the navigator score, future studies should examine the differences between ideal and non-ideal navigators, using the Navigator Score, and external criterion such as career-related measures with established cut-off scores related to meaningful constructs. The criteria for the Navigator Score, completing 50% or more of the tasks included in a subscale, should be critically assessed through attempts to modify the criteria without losing the meaningfulness of the construct. In other words, changing the criteria for the Navigator Score should maintain significant differences between these groups, ideal and non-ideal navigators, on criterion-related measures such as the MVS, CCM, CDDQ, and CTI. In an effort to improve subscale reliabilities, especially for Valuing and Communication 1, more items should be generated. Furthermore, additional items for subscales could create an even amount of items on each subscale allowing for more precise comparisons

between subscales and criteria for establishing a stable scoring method for the Navigator Score.

Conclusion

Conceptualized from and operationalizing the Cognitive Information Processing Theory's decision-making model, the CASVE-CQ was developed to allow researchers and practitioners to obtain information regarding an individual's overall progression in career decision-making as well as phase and item level data which can identify areas in which an individual may have difficulty in completing career decision-making related tasks. A measure to assess an individual's standing and progress in the CASVE cycle was developed with regard to related career variables such as vocational identity, career decision-making difficulties, career commitment, CASVE cycle related items, and negative career thoughts. Significant differences between ideal and non-ideal navigators, using the Navigator Score, of the CASVE cycle were found with each of the aforementioned constructs. The CASVE-CQ is an ideal measure to be utilized in the established battery of career assessments associated with the Cognitive Information Processing theory. Additionally, the CASVE-CQ adds a unique checklist type measure that provides concrete tasks that individuals should engage in as they work through the career decision-making process. Future studies should include more diverse populations, including age, gender, race, and ethnicity, in order to support the confirmation of the factor structure of the CASVE-CQ.

APPENDIX A – The Five Phases of the CASVE Cycle



Adapted from: Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., & Reardon, R. C. (1992).

A cognitive theory to career services: Translating concepts into practice. *Career Development Quarterly*, 41, 67-74. Copyright © National Career Development Association. Used with permission.

APPENDIX B – The CASVE-CQ Student Pilot Version

Instructions: You are being asked to evaluate the quality of items that will be used on a survey designed to assess career decision-making experiences. Please evaluate each item on HOW WELL YOU UNDERSTAND IT, not as if you were answering it.

Please rate each item from "Very Unclear" meaning you understand the item fully and would change nothing to "Very Clear" meaning you do not understand the item at all and would change or eliminate the item.

The above item is:

Very Unclear Unclear Neither clear or unclear Clear Very Clear

After rating each item, please comment in as much detail as you would like about the item. Please consider things such as what issue the item concerns and how the item is stated.

You are also encouraged to express any questions, comments, or concerns you have about the items out loud as you fill out the questionnaire.

Do you have comments or suggestions for the above item (i.e. how do you feel about the item, wording, or general relevancy of the item for career development)?

1. I have talked to my family about my career problem.
2. I have talked to my partner about my career problem.
3. I can identify the difference between my current career situation and achieving my career goals.
4. I feel that my family understands my career choices.
5. I know where I need to start to achieve my career goals.
6. I feel that I am where I want to be in my career.
7. I can imagine the steps needed to accomplish my career goals.
8. I will be able to recognize when my career goals are reached.
9. I feel a lot of pressure to make a career decision.
10. The amount of effort it takes to make a career decision is overwhelming.
11. I struggle with thinking about my future.
12. I have chosen my preferred career option and have decided on backup option(s).

13. I do not know how to find solutions to my career problem.
14. I am aware of my career values.
15. I am aware of my career interests.
16. I am aware of my career skills.
17. I am aware of my career options.
18. I am aware of the way I make decisions about my career.
19. I have thought about how well the career options I am considering satisfy my values.
20. I have thought about how well the career options I am considering satisfy my interests.
21. I have thought about how well I can use my skills in the career options I am considering.
22. I need more information about my career options.
23. I need help in identifying my career options.
24. I need more information about myself before I can find solutions to my career problem.
25. I do not know how to identify self-knowledge that relates to solving my career problem.
26. It is hard for me to identify solutions to my career problem.
27. I do not understand how to balance my career goals and family goals.
28. I do not know enough about the world of career to make a career decision.
29. I know how to generate options to solve my career problem.
30. I often feel that I struggle to make important decisions.
31. I have successfully made important decisions in the past.
32. I have thought about 3-5 options that would allow me to achieve my career goals.
33. I am currently looking at all of my possible career options.
34. I am able to identify many options that match my values.
35. I am able to identify many options that match my interests.
36. I am able to identify many options that match my skills.
37. I have explored a large amount of career options and then narrowed those down to a few that I feel good about.
38. I can narrow my career options to a few that I am seriously considering.
39. I am having difficulty narrowing down the best career options for me since there are so many.
40. I have considered my family when thinking about my career problem.
41. I have compared the costs and benefits associated with each of my career options.
42. I have considered my partner when thinking about what career I might pursue.
43. I know what is important to me.
44. I have rank ordered my career options.
45. I know what matters to me in my career.
46. I can identify important features that my career choice should have.
47. I have considered my career in light of other life roles.
48. I know how my career will fit into my life.
49. I know how much free time I will have in my chosen line of career.
50. I want the career I choose to be right for my family.

51. I can easily compare my career options.
52. I know the strengths and weaknesses of each of my career options based on my own career values.
53. I am prepared to eliminate my least favorite career options after I have compared them.
54. I am ready to take the necessary steps to reach my career goal.
55. I have an outlined plan to reach my career goal.
56. I have a good idea of the timeline for achieving my career goal.
57. I know the steps I need to take in order to reach my career goal.
58. I am taking the necessary steps to reach my career goal.
59. I know the details surrounding my career choice.
60. I am confident in my career decision.
61. I have chosen a career option that best solves my career problem.
62. I am in the process of achieving my career goals.
63. I know what I will need to be doing in six months from now in order to reach my career goal.
64. I have chosen the career choice that is best for me.
65. I have a plan of action to achieve my career goal.
66. I am familiar with the types of experiences I must gain in order to achieve my career goal.
67. I know exactly how to achieve my career goal.
68. I have chosen a career option that incorporates my career values.
69. I have chosen a career option that incorporates my career interests.
70. I have chosen a career option that incorporates my career skills.
71. My partner will be satisfied with my career choice.
72. My family will be satisfied with my career choice.
73. I am satisfied with my career choice.
74. I know my career choice will be an enjoyable aspect of my life.
75. I am satisfied with how I made my career choice.
76. I have selected the best choice, for me, from my career options.
77. I no longer feel pressured to make any decisions about my career.
78. I feel less anxiety now that I have made a decision about my career.
79. I have a sense of relief now that I have made a career decision.

APPENDIX C – CASVE-CQ Expert Review Version

Thank you for agreeing to review items for the CASVE Cycle Questionnaire (CASVE-CQ). Your expertise and feedback are greatly appreciated.

Instructions: You are being asked to evaluate the quality of items and directions that will be used on a survey designed to assess the phases of the CASVE cycle. Specifically, we ask that you complete the 6 tasks detailed below.

Comment on and provide your rating of the assessment's directions provided to test-takers (CASVE-CQ Directions Tab).

Using the information provided in the tab titled Items:

Please rate each item for clarity from "Very Unclear" meaning you do not understand the item at all and would change or eliminate the item to "Very Clear" meaning you understand the item fully and would change nothing.

After rating each item, please comment in as much detail as you would like about the item. Please consider things such as what issue the item concerns and how the item is stated.

In addition, please indicate which CASVE cycle phase (Communication, Analysis, Synthesis, Valuing, or Execution) you believe the item best represents. And the last task within the Items tab, please classify the Importance of each item as essential, useful but not essential, or not necessary. The importance of the item should be determined with regards to how essential you see the item for assessing a phase of the CASVE cycle.

Finally, please use the Overall Feedback tab to comment on the assessment or items more generally.

The CASVE Cycle Questionnaire

Directions:

As you complete this questionnaire please keep in mind a current career problem.

Answer each question with YES indicating you have completed this task or NO indicating you have not completed this task. All items may not apply to you; simply answer those items with NO. If you are currently in an educational program, it may be beneficial to think about some items in terms of your final career goal.

Key Terms you will see in the questionnaire items:

Career problem: an identifiable discrepancy between where you are currently in your career and where you would like to be in the future. Examples of career problems are picking a major, obtaining an internship, picking a career field, or obtaining a job.

Career values: factors you find important to consider when making career decisions. Examples of career values are income level, work and family balance, independence, and prestige.

The above directions are for individuals taking the CASVE-CQ. Do you have comments or suggestions for the above directions?

Select one answer for each item.

Phase?	Communication	Analysis	Synthesis	Valuing
	Execution			
Clarity?	Very Unclear	Unclear	Neither	Clear
	Very Clear			
Importance?	Essential	Useful but not essential	Not necessary	

1. I know the steps I need to take in order to reach my career goal.
2. I have talked to my partner about my career problem.
3. I do not understand how to identify information about myself that would help solve my career problem.
4. I feel that my family understands my career choices.
5. I am confident in my career decision.
6. I feel that I am where I want to be in my career.
7. I can imagine the steps needed to accomplish my career goals.
8. I will be able to recognize when my career goals are reached.
9. I no longer feel pressured to make any decisions about my career.
10. I have chosen a career option that incorporates my career interests.
11. I struggle with thinking about my future.
12. There is one career choice that I prefer, but I also have other options if my first choice doesn't work out.
13. I need help in identifying my career options.
14. I want the career I choose to be right for my family.
15. I am aware of my career interests.
16. I can narrow my career options to a few that I am seriously considering.
17. I am aware of my career options.
18. I am aware of the way I make decisions about my career.
19. My partner will be satisfied with my career choice.
20. I have thought about how well the career options I am considering satisfy my interests.
21. I have thought about how well I can use my skills in the career options I am considering.
22. I need more information about my career options.
23. I have selected the best choice, for me, from my career options.
24. I need more information about myself before I can find solutions to my career problem.
25. I know the differences between the current status of my career goals and what it would look like to have achieved my career goal.
26. It is hard for me to identify solutions to my career problem.
27. I have an outlined plan to reach my career goal.

28. I do not know enough about the world of work to make a career decision.
29. I do not have trouble thinking of ways to solve my career problem.
30. I often feel that I struggle to make important decisions.
31. I have successfully made important decisions in the past.
32. I have thought about 3-5 options that would allow me to achieve my career goals.
33. I am currently looking at all of my possible career options.
34. I am able to identify many options that match my values.
35. I am familiar with the types of work experience I must gain in order to achieve my career goals.
36. I am able to identify multiple career options that match my career interests.
37. I have explored a large amount of career options and then narrowed those down to a few that I feel good about.
38. I am aware of my career skills.
39. I am having difficulty narrowing down the best career options for me since there are so many.
40. I have considered my family when thinking about my career problem.
41. I have compared the costs and benefits associated with each of my career options.
42. I have considered my partner when thinking about what career I might pursue.
43. I am satisfied with my career choice.
44. I have chosen a career option that incorporates my career skills.
45. I know what matters to me in my career.
46. I can identify important features that my career choice should have.
47. I have considered my career in relation to other life roles.
48. I know how my career will fit into my life.
49. I know how much free time I will likely have in my chosen career.
50. I am aware of my career values.
51. I can easily compare my career options.
52. I know the strengths and weaknesses of each of my career options based on my own career values.
53. I am prepared to eliminate my least favorite career options after I have compared them.
54. I am ready to take the necessary steps to reach my career goal.
55. I do not understand how to balance my career goals and family goals.
56. I have a good idea of the timeline for achieving my career goal.
57. I have talked to my family about my career problem.
58. I am taking the necessary steps to reach my career goal.
59. I am able to identify multiple career options that match my career-related skills.
60. I know where I need to start to achieve my career goals.
61. I have chosen a career option that best solves my career problem.
62. I am in the process of achieving my career goals.
63. I know what I will need to be doing in six months from now in order to reach my career goal.

- 64. I have chosen the career choice that is best for me.
- 65. I have a plan of action to achieve my career goal.
- 66. I know the details (i.e. rate of pay, schedule) surrounding my chosen career.
- 67. I know exactly how to achieve my career goal.
- 68. I have chosen a career option that incorporates my career values.
- 69. The amount of effort it takes to make a career decision is overwhelming.
- 70. I have ranked my career options in order.
- 71. The career options I am considering satisfy my career values.
- 72. My family will be satisfied with my career choice.
- 73. I know what is important to me.
- 74. I know my career choice will be an enjoyable aspect of my life.
- 75. I am satisfied with how I made my career choice.
- 76. I am unsure where to begin in order to solve my career problem.
- 77. I feel a lot of pressure to make a career decision.
- 78. I feel less anxiety now that I have made a decision about my career.
- 79. I have a sense of relief now that I have made a career decision.

Is there any other feedback you would like to provide regarding any item or the items in general?

APPENDIX D - CASVE-CQ Phase 4 Version

Directions:

As you complete this questionnaire please keep in mind a current career problem. Answer each question with YES indicating you have completed this task or NO indicating you have not completed this task. All items may not apply to you; simply answer those items with NO. If you are currently in an educational program, it may be beneficial to think about some items in terms of your final career goal.

Key Terms you will see in the questionnaire items:

Career problem: an identifiable discrepancy or gap between where you are currently in your career and where you would like to be in the future. Examples of career problems are choosing a major, obtaining an internship, selecting a career field, or obtaining a job.

Career values: factors you find important to consider when making career decisions.

Examples of career values are income level, work and family balance, independence, and prestige.

All items will be answered with “yes” or “no”.

* Denotes negatively worded items.

Communication

1. I know what steps it would take to achieve my career goals.
2. I feel that I am where I want to be in my career development.
3. I feel a lot of pressure to make a career decision.*
4. The amount of effort it takes to make a career decision is overwhelming.*

5. I struggle with thinking about my future.*
6. I am unsure where to begin to solve my career problem.*
7. It is hard for me to identify solutions to my career problem.*
8. I am confident in my career decision.
9. I have chosen a career or job option that best solves my career problem.
10. I have chosen the career that is best for me.
11. I have chosen a career option that incorporates my career interests.
12. I no longer feel pressured to make any decisions about my career.
13. I feel less anxiety now that I have made a decision about my career.

Analysis

1. I am aware of my career values.
2. I am aware of my skills.
3. I can list my career options.
4. I am aware of the way I make decisions about my career.
5. I have thought about how well the career or job options I am considering satisfy my interests.
6. I have thought about how well I can use my skills in the career options I am considering.
7. I need more information about my career options.*
8. I need help in identifying my career options.*
9. I need more information about myself before I can find solutions to my career problem.*
10. I know what is important to me.
11. I know the strengths and weaknesses of each of my career options based on my own career values.
12. I am familiar with the types of experiences I must gain in order to achieve my career goal.

Synthesis

1. There is one career choice that I prefer, but I also have other options if my first choice doesn't work out.
2. I have thought about 3-5 options that would allow me to achieve my career goals
3. I am currently exploring all of my possible career options.
4. I am able to identify many career or job options that match my values.
5. I am able to identify multiple jobs that match my career interests.
6. I am able to identify multiple career options that match my career-related skills.
7. I have explored a large amount of career or job options and then narrowed those down to a few that I feel good about.
8. I am having difficulty narrowing down the best career or job options for me since there are so many.*
9. I can narrow my career or job options to a few that I am seriously considering.

10. I am able to compare my career or job options based on information I have gathered about them.
11. I do not have enough information to compare my career or job options accurately.*

Valuing

1. I have talked to my family about my career problem.
2. I have talked to my significant other about my career problem.
3. The career options I am considering satisfy my career values.
4. I do not understand how to balance my career goals and family goals.*
5. I have not considered my family when thinking about my career problem.*
6. I have compared the advantages and disadvantages and benefits associated with each of my career options.
7. I have considered my career in relation to other life roles (e.g. family, work, leisure, spirituality).
8. I know how my career choice will fit into my life.
9. I can easily rank order the career or job options I am considering.
10. I have chosen a career or job option that incorporates my career values.
11. My significant other will be satisfied with my career choice.
12. My family will be satisfied with my career choice.
13. I know my career choice will be an enjoyable aspect of my life.
14. I have selected the best choice, for me, from my career or job options.

Execution

1. I can imagine the steps needed to accomplish my career goals.
2. I will know when I have reached my career goals.
3. I am ready to take the necessary steps to reach my career goal.
4. I still need to outline a plan to reach my career goals.*
5. I am unsure of a good timeline for achieving my career goal.*
6. I know the steps I need to take in order to reach my career goal.
7. I am taking the necessary steps to reach my career goal.
8. I am in the process of achieving my career goals.
9. I know what I will need to be doing in six months from now in order to reach my career goal.
10. I have a plan of action to achieve my career goal.

APPENDIX E – Proposed CASVE-CQ from Exploratory Factor Analysis

Factor 1 – Execution

1. I know what steps it would take to achieve my career goals. (C)
2. I am aware of my career values. (A)
3. I am aware of my skills. (A)
4. I am familiar with the types of experiences I must gain in order to achieve my career goal. (A)
5. I know how my career choice will fit into my life. (V)
6. I can easily rank order the career or job options I am considering. (V)
7. I can imagine the steps needed to accomplish my career goals.
8. I will know when I have reached my career goals.
9. I am ready to take the necessary steps to reach my career goal.
10. I know the steps I need to take in order to reach my career goal.
11. I am taking the necessary steps to reach my career goal.
12. I am in the process of achieving my career goals.
13. I know what I will need to be doing in six months from now in order to reach my career goal.
14. I have a plan of action to achieve my career goal.

Factor 2 – Analysis (Reverse Scored)

1. I am unsure where to begin to solve my career problem. (C)
2. I need help identifying my career options.
3. I need more information about my career options.
4. I need more information about myself before I can find solutions to my career problem.
5. I am having difficulty narrowing down the best career or job options for me since there are so many. (S)
6. I do not have enough information to compare my career or job options accurately. (S)
7. I do not understand how to balance my career goals and family goals. (V)
8. I have not considered my family when thinking about my career problem. (V)
9. I still need to outline a plan to reach my career goals. (E)
10. I am unsure of a good timeline for achieving my career goal. (E)

Factor 3 – Synthesis

1. I am aware of the way I make decisions about my career. (A)
2. I have thought about how well I can use my skills in the career options I am considering. (A)
3. There is one career choice that I prefer, but I also have other options if my first choice doesn't work out.
4. I have thought about 3-5 options that would allow me to achieve my career goals.

5. I am currently exploring all of my possible career options.
6. I am able to identify many career or job options that match my values.
7. I am able to identify multiple jobs that match my career interests.
8. I am able to identify multiple career options that match my career-related skills.
9. I have explored a large amount of career or job options and then narrowed those down to a few that I feel good about.
10. I can narrow my career or job options to a few that I am seriously considering.
11. I am able to compare my career or job options based on information I have gathered about them.
12. I know the strengths and weaknesses of each of my career options based on my own career values. (A)
13. I have compared the advantages and disadvantages and benefits associated with each of my career options. (V)
14. I can list my career options. (A)

Factor 4 – Communication 2

1. I am confident in my career decision.
2. I have chosen a career or job option that best solves my career problem.
3. I have chosen the career that is best for me.
4. I have chosen a career option that incorporates my career interests.
5. I feel less anxiety now that I have made a decision about my career.
6. I have chosen a career or job option that incorporates my career values. (V)
7. I have selected the best choice, for me, from my career or job options. (V)
8. I feel that I am where I want to be in my career development.

Factor 5 – Valuing

1. The career options I am considering satisfy my career values.
2. My significant other will be satisfied with my career choice.
3. My family will be satisfied with my career choice. 4.
5. I know my career choice will be an enjoyable aspect of my life.
6. I have considered my career in relation to other life roles (e.g. family, work, leisure, spirituality).

Factor 6 – Communication 1 (Reverse Scored)

1. I feel a lot of pressure to make a career decision.
2. The amount of effort it takes to make a career decision is overwhelming.
3. I struggle with thinking about my future.
4. It is hard for me to identify solutions to my career problem.

The original intentioned phase for the item developed in parentheses if differed from the current phase.

APPENDIX F – Demographic Questionnaire

Directions: Please fill in the blank or check the response that best applies to you.

1. Age: _____ (You must be 18 years or older to continue)
2. Sex:
 - ☐ Male
 - ☐ Female
 - ☐ Transgender
3. Racial/Ethnic Background:
 - ☐ American Indian/Alaskan Native
 - ☐ Asian/Pacific Islander
 - ☐ Black (Non-Hispanic)
 - ☐ Hispanic
 - ☐ White (Non-Hispanic)
 - ☐ Other: (please specify) _____
4. Marital Status
 - ☐ Single
 - ☐ Married
 - ☐ Divorced
 - ☐ Widowed/Widower
 - ☐ Other: (please specify) _____
5. How many semesters have you been in college? _____
(Please count summer even if you did not take classes. Please count current semester.)
6. Have you declared a major yet? ☐ Yes ☐ No (If no, will skip next two questions.)
7. Current Major

8. How many semesters have you been in your current major? _____
9. Current Standing
 - ☐ Freshman
 - ☐ Sophomore
 - ☐ Junior
 - ☐ Senior
 - ☐ Other: _____

10. Current GPA

USM GPA: _____

Major GPA: _____

11. Do you currently work? (If no, will skip next question.)

☐ Yes

☐ No

12. Do you see your current job as part of your long-term career path?

☐ Yes

☐ No

APPENDIX G – IRB Approval Letter



THE UNIVERSITY OF
SOUTHERN MISSISSIPPI

INSTITUTIONAL REVIEW BOARD

118 College Drive #5147 | Hattiesburg, MS 39406-0001

Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 15072006

PROJECT TITLE: Assessing Career Decision-Making Status: The CASVE Cycle Questionnaire

PROJECT TYPE: New Project

RESEARCHER(S): Brianna Werner

COLLEGE/DIVISION: College of Education and Psychology

DEPARTMENT: Psychology

FUNDING AGENCY/SPONSOR: N/A

IRB COMMITTEE ACTION: Exempt Review Approval

PERIOD OF APPROVAL: 07/23/2015 to 07/22/2016

Lawrence A. Hosman, Ph.D.

Institutional Review Board

APPENDIX H – Pilot Consent Form

1. Purpose:

The purpose of this study is to examine the CASVE Cycle Questionnaire survey items to improve them for further research and eventually be used to aid career counselors in assisting individuals to make career decisions.

2. Description of Study:

Participants will be asked to sign-in using their printed name, signature, and USM e-mail address in order for SONA credit to be distributed. Participants will then be asked to give feedback on content, meaning, clarity, and wording of the survey items. Participants are encouraged to give feedback and ask questions out loud. Two researchers will be present. One researcher will be talking with participants and answering questions. A second researcher will be taking notes. Participants' feedback and questions will also be audio recorded. The study is in person, will take no more than 60 minutes to complete, and is designed to be completed in one session. Participants who complete the study will receive 3 research credits.

3. Benefits:

Participants will earn 3 research credits for completing the study; those who do not complete the study will still receive research credit. Participants will receive no other direct benefits; however, the information provided will enable researchers to better understand college students career decision-making. This study does not involve treatment procedures of any kind or the potential for medical injury.

4. Risks:

There are no foreseeable risks to participating in this study. If you feel that completing these questionnaires has resulted in emotional distress, please stop and notify the researcher (xxxxxx@eagles.usm.edu). If you should decide at a later date that you would like to discuss your concerns, please contact the research supervisor, Dr. Emily Yowell (xxxxxx@usm.edu). Alternatively, you may contact one of several local agencies, such as:

Student Counseling Services
200 Kennard-Washington Hall
Phone: (601) xxx-xxxx

Community Counseling and Assessment Clinic
Owings-McQuagge Hall, Room 202
Phone: (601) xxx-xxxx

USM Career Services
McLemore Hall (MCL) 125
118 College Drive #5014

Pine Belt Mental Healthcare Resources
Phone: (601) xxx-xxxx

Hattiesburg, MS 39406
Phone: (601) xxx-xxxx

5. Confidentiality:

A second researcher will be taking notes during participation. Participant names will not be included in the notes. To protect the privacy of the participants, the sign-in sheet will be destroyed after SONA credit is distributed. Only the researchers involved in this study will have access to the notes. By signing this informed consent form, you will be agreeing to keep the identity of the participants and the content of this group confidential. While the researchers will take the previously described measures to maintain the confidentiality of the group participants and contents, they will not be able to guarantee that other group members will keep this information confidential.

6. Alternative Procedures:

Students who do not wish to participate in this study may sign up for another study instead or talk with their instructor(s) about non-research options.

7. Participant's Assurance:

This project has been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Chair of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to the Principal Investigator using the contact information provided in Project Information Section above.

CONSENT TO PARTICIPATE IN RESEARCH

Participant's Name:

Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal

information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator with the contact information provided above. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-5997.

Research Participant

Person Explaining the Study

Date

Date

APPENDIX I – Online Pilot Consent Form

1. Purpose:

The purpose of this study is to examine the CASVE Cycle Questionnaire survey items to improve them for further research and eventually be used to aid career counselors in assisting individuals to make career decisions.

2. Description of Study:

Participants will be asked to complete online measures regarding their career decision-making process. The study is fully online, will take about 30 minutes to complete, and is designed to be completed in one session (i.e., starting the study and then trying to finish it later may not work). Participants who complete the study will receive .5 research credit. Quality assurance checks will be used to make sure that participants are reading each question carefully and answering thoughtfully. Participants who do not pass these checks will NOT receive credit for completing the study.

3. Benefits:

Participants will earn .5 research credit for completing the study; those who do not complete the study will not receive research credit. Participants will receive no other direct benefits; however, the information provided will enable researchers to better understand college students career decision-making. This study does not involve treatment procedures of any kind or the potential for medical injury.

4. Risks:

There are no foreseeable risks to participating in this study. If you feel that completing these questionnaires has resulted in emotional distress, please stop and notify the researcher (xxxxxx@eagles.usm.edu). If you should decide at a later date that you would like to discuss your concerns, please contact the research supervisor, Dr. Emily Yowell (xxxxxx@usm.edu). Alternatively, you may contact one of several local agencies, such as:

Student Counseling Services
200 Kennard-Washington Hall
Phone: (601) xxx-xxxx
USM Career Services
McLemore Hall (MCL) 125
118 College Drive #5014
Hattiesburg, MS 39406
Phone: (601) xxx-xxxx

Community Counseling and Assessment Clinic
Owings-McQuagge Hall, Room 202
Phone: (601) xxx-xxxx
Pine Belt Mental Healthcare Resources
Phone: (601) xxx-xxxx

5. Confidentiality:

The online measures are designed to be anonymous, and the information you provide will be kept strictly confidential. Any potentially identifying information (e.g., your IP address) will not be retained with your responses.

6. Alternative Procedures:

Students who do not wish to participate in this study may sign up for another study instead or talk with their instructor(s) about non-research options.

7. Participant's Assurance:

This project has been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Chair of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to the Principal Investigator using the contact information provided in Project Information Section above.

CONSENT TO PARTICIPATE IN RESEARCH

Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator with the contact information provided above. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The

University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS
39406-0001, (601) 266-5997.

I agree to participate in this research:

Yes

No

Are you 18-25 years of age?

Yes

No

APPENDIX J – Outside Recruitment Consent Form

1. Purpose:

The purpose of this study is to establish the CASVE Cycle Questionnaire, a measure to assess an individual's standing in the CASVE Cycle, a career decision-making cycle based on the cognitive information process approach to career development. The cognitive information processing approach is used extensively in applied settings, and this measure will allow career counselors to pinpoint an individual's position in the CASVE cycle to more efficiently serve clients.

2. Description of Study:

Participants will be asked to complete online measures regarding their vocational identity, career decision-making difficulties, career commitment, characteristics of emerging adulthood, and negative career thoughts. The study is fully online, will take about 60 minutes to complete, and is designed to be completed in one session (i.e., starting the study and then trying to finish it later may not work). Participants who complete the study will have the option to enter their email address (which will not be connected to their answers) in a lottery drawing for a \$25 gift card. Quality assurance checks will be used to make sure that participants are reading each question carefully and answering thoughtfully. Participants who do not pass these checks will NOT receive credit for completing the study.

3. Benefits:

Participants will have the option to enter their email address (which will not be connected to their answers) in a lottery drawing for a \$25 gift card; those who do not complete the study will not receive entry into the lottery drawing. Participants will receive no other direct benefits; however, the information provided will enable researchers to better understand the career decision-making process of college students. This study does not involve treatment procedures of any kind or the potential for medical injury.

4. Risks:

There are no foreseeable risks to participating in this study. If you feel that completing these questionnaires has resulted in emotional distress, please stop and notify the researcher (xxxxxx@eagles.usm.edu). If you should decide at a later date that you would like to discuss your concerns, please contact the research supervisor, Dr. Emily Yowell (xxxxxx@usm.edu). Alternatively, you may contact one of several national agencies, such as:

Substance Abuse and Mental Health Services Administration - Behavioral Health
Treatment Services Locator

<https://findtreatment.samhsa.gov/>

1-800-662-HELP(4357) - Treatment Referral Hotline

ULifeline - College Student Mental Health

<http://ulifeline.org>

1-800-273-TALK(8255)

You may also wish to contact your university counseling center or career services for further assistance. This information is typically available on your university website.

5. Confidentiality:

The online measures are designed to be anonymous, and the information you provide will be kept strictly confidential. Any potentially identifying information (e.g., your IP address) will not be retained with your responses. Emails entered in the lottery drawing will not be connected to the information you provide or your answers to survey questions.

6. Alternative Procedures:

Students who do not wish to participate in this study may stop participation at any time without penalty.

7. Participant's Assurance:

This project has been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Chair of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to the Principal Investigator using the contact information provided in Project Information Section above.

CONSENT TO PARTICIPATE IN RESEARCH

Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator with the contact information provided above. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-5997.

I agree to participate in this research:

Yes

No

Are you an undergraduate college student?

Yes

No

Are you 18-25 years of age?

Yes

No

APPENDIX K – SONA Consent Form

1. Purpose:

The purpose of this study is to establish the CASVE Cycle Questionnaire, a measure to assess an individual's standing in the CASVE Cycle, a career decision-making cycle based on the cognitive information process approach to career development. The cognitive information processing approach is used extensively in applied settings, and this measure will allow career counselors to pinpoint an individual's position in the CASVE cycle to more efficiently serve clients.

2. Description of Study:

Participants will be asked to complete online measures regarding their vocational identity, career decision-making difficulties, career commitment, characteristics of emerging adulthood, and negative career thoughts. The study is fully online, will take about 60 minutes to complete, and is designed to be completed in one session (i.e., starting the study and then trying to finish it later may not work). Participants who complete the study will receive 1 research credit. Quality assurance checks will be used to make sure that participants are reading each question carefully and answering thoughtfully. Participants who do not pass these checks will NOT receive credit for completing the study.

3. Benefits:

Participants will earn 1 research credit for completing the study; those who do not complete the study will not receive research credit. Participants will receive no other direct benefits; however, the information provided will enable researchers to better understand the career decision-making process of college students. This study does not involve treatment procedures of any kind or the potential for medical injury.

4. Risks:

There are no foreseeable risks to participating in this study. If you feel that completing these questionnaires has resulted in emotional distress, please stop and notify the researcher (xxxxxx@eagles.usm.edu). If you should decide at a later date that you would like to discuss your concerns, please contact the research supervisor, Dr. Emily Yowell (xxxxxx@usm.edu). Alternatively, you may contact one of several local agencies, such as:

Student Counseling Services
200 Kennard-Washington Hall
Phone: (601) xxx-xxxx

Community Counseling and Assessment Clinic
Owings-McQuagge Hall, Room 202
Phone: (601) xxx-xxxx

USM Career Services
McLemore Hall (MCL) 125
118 College Drive #5014
Hattiesburg, MS 39406
Phone: (601) xxx-xxxx

Pine Belt Mental Healthcare Resources
Phone: (601) xxx-xxxx

5. Confidentiality:

The online measures are designed to be anonymous, and the information you provide will be kept strictly confidential. Any potentially identifying information (e.g., your IP address) will not be retained with your responses.

6. Alternative Procedures:

Students who do not wish to participate in this study may sign up for another study instead or talk with their instructor(s) about non-research options.

7. Participant's Assurance:

This project has been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations.

Any questions or concerns about rights as a research participant should be directed to the Chair of the IRB at 601-266-5997. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits.

Any questions about the research should be directed to the Principal Investigator using the contact information provided in Project Information Section above.

CONSENT TO PARTICIPATE IN RESEARCH

Consent is hereby given to participate in this research project. All procedures and/or investigations to be followed and their purpose, including any experimental procedures, were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

The opportunity to ask questions regarding the research and procedures was given. Participation in the project is completely voluntary, and participants may withdraw at any time without penalty, prejudice, or loss of benefits. All personal information is strictly confidential, and no names will be disclosed. Any new information that develops during the project will be provided if that information may affect the willingness to continue participation in the project.

Questions concerning the research, at any time during or after the project, should be directed to the Principal Investigator with the contact information provided above. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-5997.

I agree to participate in this research:

Yes

No

Are you an undergraduate college student?

Yes

No

Are you 18-25 years of age?

Yes

No

REFERENCES

- Albion, M. J., & Fogarty, G. J. (2002). Factors influencing career decision making in adolescents and adults. *Journal of Career Assessment, 10*, 91–126.
doi:10.1177/1069072702010001006
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*(5), 469–480. doi:10.1037//0003-066X.55.5.469
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York, NY: Oxford University Press.
- Blau, G. J. (1985). The measurement and prediction of career commitment. *Journal of Occupational Psychology, 58*, 277-288.
- Bubany, S. T., Krieshok, T. S., Black, M. D., & McKay, R. A. (2008). College students' perspectives on their career decision making. *Journal of Career Assessment, 16*(2), 177-197. doi:10.1177/1069072707313189
- Carson, K. D., & Bedeian, A. G. (1994). Career commitment: Construction of a measure and examination of its psychometric properties. *Journal of Vocational Behavior, 44*, 237–262. doi:10.1006/jvbe.1994.1017
- Carson, K. D., & Carson, P. P. (1998). Career commitment, competencies, and citizenship. *Journal of Applied Psychology, 6*(2), 195–208.
- Cattell, B.R. (1966). The screen test for number of factors. *Multivariate Behavioral Research, 1*(2). 245-276.

- Chung, Y. B. (2002). Career decision-making self-efficacy and career commitment: Gender and ethnic differences among college students. *Journal of Career Development, 28*(4), 277–284. doi:10.1023/A:1015146122546
- Diemer, M.A. ,& Blustein, D.L. (2007). Vocational hope and vocational identity: Urban adolescents’ career development. *Journal of Career Assessment, 15*(1), 98-118.
- Erikson, E. H. (1950). *Childhood and society*. New York, NY: Norton.
- Farmer, H. S., & Chung, Y. B. (1995). Variables related to career commitment, mastery motivation, and level of career aspiration among college students. *Journal of Career Development, 21*(4), 265–278. doi:10.1007/BF02106151
- Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology, 43*(4), 510–526.
doi:10.1037//0022-0167.43.4.510
- Harris, L. N. (2014). Black, queer, and looking for a job: An exploratory study of career decision making among self-identified sexual minorities at an urban historically Black college/university. *Journal of Homosexuality, 61*(10), 1393-1419.
doi:10.1080/00918369.2014.928170
- Hirschi, A., & Lage, D. (2007). The relation of secondary students’ career choice readiness to a six-phase model of career decision making. *Journal of Career Development, 34*(2), 164–191. doi:10.1177/0894845307307473
- Holland, J. L., Daiger, D. C., & Power, P. G. (1980). *My vocational situation*. Palo Alto, CA: Consulting Psychologists Press.
- Holland, J. L., Johnston, J. A., & Asama, N. F. (1993). The vocational identity scale: A diagnostic and treatment tool. *Journal of Career Assessment, 1*(1), 1-12.

- Horn, J.L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, 30(2), 179-185.
- Johnson, P., Schamuhn, T. D., Nelson, D. B., & Buboltz, W. C. (2014). Differentiation levels of college students: Effects on vocational identity and career decision making. *Career Development Quarterly*, 62, 70–80. doi:10.1002/j.2161-0045.2014.00071.x
- Jones, L. K., & Lohmann, R. C. (1998). The career decision profile: Using a measure of career decision status in counseling. *Journal of Career Assessment*, 6, 209–230. doi:10.1177/106907279800600207
- Kaiser, H.F. (1958). The varimax criterion of analytic rotation in factor analysis. *Psychometrika*, 23, 187 -200.
- Kelly, K. R., & Shin, Y.J. (2008). Relation of neuroticism and negative career thoughts and feelings to lack of information. *Journal of Career Assessment*, 17(2), 201–213. doi:10.1177/1069072708329029
- Kleiman, T., Gati, I., Peterson, G., Sampson, J., Reardon, R., & Lenz, J. (2004). Dysfunctional thinking and difficulties in career decision making. *Journal of Career Assessment*, 12(3), 312–331. doi:10.1177/1069072704266673
- Krieshok, T. S., Black, M. D., & McKay, R. A. (2009). Career decision making: The limits of rationality and the abundance of non-conscious processes. *Journal of Vocational Behavior*, 75(3), 275–290. doi:10.1016/j.jvb.2009.04.006
- Ladany, N., Melincoff, D. S., Constantine, M. G., & Love, R. (1997). At-risk urban high school students' commitment to career choices, *Journal of Counseling and Development*, 76, 45–53.

- Lawshe, C.H. (1975). A quantitative theory to content validity. *Personnel Psychology*, 28, 563–575. doi:10.1111/j.1744-6570.1975.tb01393.x
- Luyckx, K., Schwartz, S. J., Goossens, L., & Pollock, S. (2008). Employment, sense of coherence, and identity formation: Contextual and psychological processes on the pathway to sense of adulthood. *Journal of Adolescent Research*, 23, 566–591. doi:10.1177/0743558408322146
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, 17(3), 437–55. doi:10.1037/a0028085
- Meyer-Griffith, K., Reardon, R. C., & Hartley, S. L. (2009). An examination of the relationship between career thoughts and communication apprehension. *The Career Development Quarterly*, 58(4), 171–181. doi:10.1002/j.2161-0045.2009.tb00054.x
- Murphy, K. A., Blustein, D. L., Bohlig, A. J., & Platt, M. G. (2010). The college-to-career transition: An exploration of emerging adulthood. *Journal of Counseling & Development*, 88, 174–181. doi:10.1002/j.1556-6678.2010.tb00006.x
- Noordin, F., Williams, T., & Zimmer, C. (2002). Career commitment in collectivist and individualist cultures: a comparative study. *The International Journal of Human Resource Management*, 13(2), 35–54. doi:10.1080/09585190110092785
- Osipow, S. H., Carney, C. G., & Barak, A. (1976). A scale of educational-vocational decidedness: A typological theory. *Journal of Vocational Behavior*, 16, 320-346.
- Osipow, S. H., & Gati, I. (1998). Construct and concurrent validity of the career decision-making difficulties questionnaire. *Journal of Career Assessment*, 6(3), 347–364. doi:10.1177/106907279800600305

- Parsons, F. (1909). *Choosing a vocation*. Boston, MA: Houghton Mifflin.
- Peterson, G. W., Sampson Jr., J. P., Lenz, J. G., & Reardon, R. C. (2002). A cognitive information processing theory to career problem solving and decision making. In D. Brown (Ed.), *Career choice and development* (pp. 312-369).
- Peterson, G. W., Sampson, J. P., & Reardon, R. C. (1991). *Career development and services: A cognitive theory*. Pacific Grove, CA: Brooks/Cole.
- Ranta, M., Dietrich, J., & Salmela-Aro, K. (2013). Career and romantic relationship goals and concerns during emerging adulthood. *Emerging Adulthood*, 2(1), 17–26.
doi:10.1177/2167696813515852
- Reardon, R. C., Lenz, J. G., Sampson, J. P., & Peterson, G. W. (2011). Big questions facing vocational psychology: A cognitive information processing perspective. *Journal of Career Assessment*, 19(3), 240–250. doi:10.1177/1069072710395531
- Reardon, R., Lenz, J., Sampson, J., & Peterson, G. (2000). *Career development and planning: A comprehensive theory*. Pacific Grove, CA: Brooks/Cole.
- Reifman, A., Colwell, M. J., & Arnett, J. J. (2007). Emerging adulthood: Theory, assessment, and application. *Journal of Youth Development*, 2(1), 1–12.
- Saka, N., Gati, I., & Kelly, K. R. (2008). Emotional and personality-related aspects of career decision-making difficulties. *Journal of Career Assessment*, 16, 403 – 424.
- Sampson, J.P., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996a) *Career Thoughts Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources.

- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996b). *Career Thoughts Inventory workbook*. Odessa, FL: Psychological Assessment Resources, Inc.
- Sampson, J. P., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1998). The design and use of a measure of dysfunctional career thoughts among adults, college students, and high school students: The career thoughts inventory. *Journal of Career Assessment*, 6(2), 115–134. doi:10.1177/106907279800600201
- Sampson, J. P., Peterson, G. W., & Reardon, R. C. (1989). Counselor intervention strategies for computer-assisted career guidance: An information-processing theory. *Journal of Career Development*, 16(2), 139–154. doi:10.1007/BF01353007
- Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. G. (2004). *Career counseling and services: A cognitive information processing theory*. Pacific Grove, CA: Brooks/Cole.
- Saunders, D. E., Peterson, G. W., Sampson, J. P., & Reardon, R. C. (2000). Relation of depression and dysfunctional career thinking to career indecision. *Journal of Vocational Behavior*, 56, 288–298. doi:10.1006/jvbe.1999.1715
- Stevens, J. (2002). *Applied multivariate statistics for the social sciences*: Hillsdale, NJ: Lawrence Erlbaum.
- Strauser, D. R., Lustig, D. C., & Ciftçi, A. (2008). Psychological well-being: its relation to work personality, vocational identity, and career thoughts. *The Journal of Psychology*, 142(1), 21–31. DOI: 10.3200/JRLP.142.1.21-36

- Stringer, K., Kerpelman, J., & Skorikov, V. (2011). Career preparation: A longitudinal, process-oriented examination. *Journal of Vocational Behavior*, 79(1), 158–169.
doi:10.1016/j.jvb.2010.12.012
- Super, D. E. (1955). The dimensions and measurement of vocational maturity. *Teachers College Record*, 57, 151–163.
- Tabachnick, B.G. & Fidell, L.S. (2011). *Using multivariate statistics*. (6th ed). Needham Heights, MA: Allyn & Bacon Inc.
- Taylor, K. M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior*, 22, 63-81.
- The University of Southern Mississippi 2016-2017 Fact Book*. (2016, December 7).
Retrieved from https://www.usm.edu/sites/default/files/groups/office-institutional-research/pdf/factbook_2016-2017.pdf
- U.S. Department of Education, National Center for Education Statistics. (2009). *2003/04 Beginning postsecondary students longitudinal study, second follow-up (BPS 04/09)*. Retrieved from <http://nces.ed.gov/pubs2012/2012256.pdf>
- Velicer, W. F. (1976). Determining the number of components from the matrix of partial correlations. *Psychometrika*, 41(3), 321 – 327.
- Walsh, W. B. & Osipow, S.H. (1988). *Career decision making*. New York, NY: Routledge.
- Workman, J. L. (2015). Parental influence on exploratory students' college choice, major, and career decision making. *College Student Journal*, 49(1), 23-30.

Xu, H., & Tracey, T. J. G. (2014). Ambiguity tolerance with career indecision: An examination of the mediation effect of career decision-making self-efficacy. *Journal of Career Assessment*. doi:10.1177/106907271455307